FANNO CREEK GREENWAY TRAIL ACTION PLAN

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Prepared for: **Metro Regional Parks and Greenspaces Department**

Prepared by: **Alta Planning + Design**

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METRO REGIONAL PARKS AND GREENSPACES DEPARTMENT

Jim Desmond, Director
Heather Kent, Planning and Education Division Manager

ALTA PLANNING + DESIGN

George Hudson, Principal
Arif Khan, Senior Planner
Daniel Lerch, Assistant Planner

PROJECT MANAGER

Mel Huie, Metro Regional Parks and Greenspaces Department

FANNO CREEK GREENWAY TRAIL ACTION PLAN WORKING GROUP MEMBERS

Commissioner Dick Schouten, Washington County
Joanne Rice, Washington County Land Use and Transportation
Aisha Willits, Washington County Land Use and Transportation
Anna Zirker, Tualatin Hills Park and Recreation District
Margaret Middleton, City of Beaverton Transportation
Roel Lundquist, City of Durham Administrator
Duane Roberts, City of Tigard Community Development
Justin Patterson, City of Tualatin Parks
Jim Sjulin, Portland Parks and Recreation
Gregg Everhart, Portland Parks and Recreation
Courtney Duke, Portland Transportation
Don Baack, SWTrails Group of Southwest Neighborhoods, Inc.
Bob Bothman, 40-Mile Loop Land Trust
Dave Drescher, Fans of Fanno Creek
Sue Abbott, National Park Service Rivers and Trails Program
Heather Kent, Metro Planning and Education Division
William Eadie, Metro Open Spaces Acquisition Division
Bill Barber, Metro Planning

For more information or copies of this report, contact:

Mel Huie, Regional Trails Coordinator
(503) 797-1731, huiem@metro.dst.or.us

Metro Regional Services
600 NE Grand Ave.
Portland, OR 97232
(503) 797-1700
www.metro-region.org

Alta Planning + Design
144 NE 28th Ave.
Portland, OR 97232
(503) 230-9862
www.altaplanning.com

FANNO CREEK GREENWAY TRAIL ACTION PLAN

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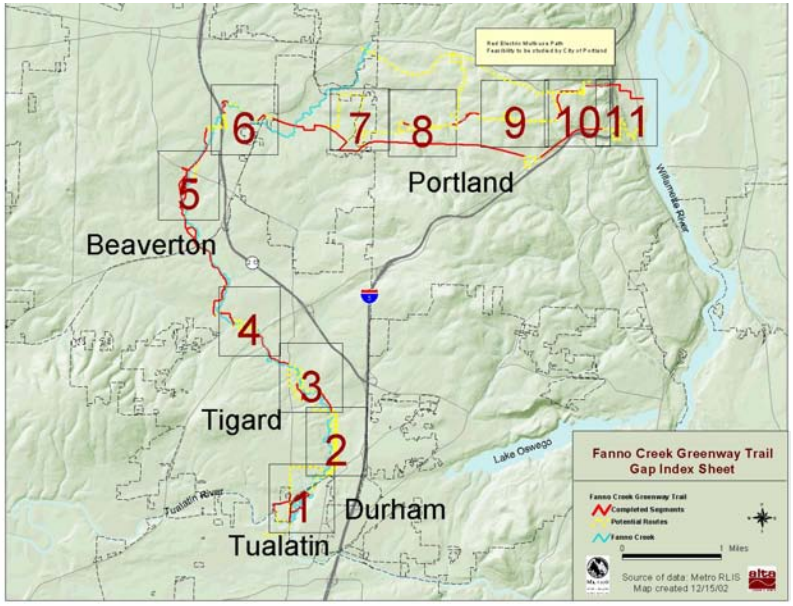
I. INTRODUCTION

The proposed Fanno Creek Greenway Trail extends 15 miles from the City of Tualatin to the City of Portland, connecting the mouth of Fanno Creek at the Tualatin River in Tualatin to Portland's Willamette Park adjacent to the Willamette River.

Trail segment near Main St. in Tigard

The trail consists of both on-street and off-street sections, many of which have already been constructed. Approximately one-half of the trail has been completed. The proposed route begins at the Tualatin River, then heads north for about nine miles through Durham, Tigard, and Beaverton, and unincorporated Washington County. The trail then veers away from Fanno Creek and follows various alignments, heading east for approximately six miles from the Garden Home Recreation Center to the Willamette River. The trail can thus be divided into two distinct segments, the multi-use path segment between the Tualatin River and Garden Home, and the "urban" segment from Garden Home east through built-up southwest Portland neighborhoods to the Willamette River. The first segment mainly follows an off-street alignment adjacent to the Fanno Creek, while the second segment uses low-volume roadways for the walking route, arterials with striped bike lanes for the biking route, and a former inter-urban rail alignment for a proposed multi-use path segment[1].

For planning purposes, the Fanno Creek Greenway Trail has been divided into 11 "gaps". Each gap is about 1 mile in length. These gaps are located along the proposed greenway where the trail is incomplete in terms of the trail segments and/or roadway crossing treatments. The existing conditions and history of the Fanno Creek Greenway Trail are summarized in Section 2. The descriptions of the gaps, recommended trail improvements, and corresponding maps are included in Sections 3 and 4. Section 5 includes details about proposed design standards and maintenance guidelines for the trail.



[1] Red Electric Trail feasibility study to be conducted by the City of Portland

II. EXISTING CONDITIONS

AFFECTED JURISDICTIONS

The Fanno Creek Greenway Trail extends through the following jurisdictions.

Scope	Entity	Jurisdiction
Region	Metro	Regional government representing over 1.3 million residents in Clackamas, Multnomah and Washington counties, and the 24 cities in the Portland metropolitan area.
County	Multnomah County, pop. 660,486	The alignments in Multnomah County are all under the jurisdiction of the City of Portland.
County	Washington County, pop. 445,342	Alignments in Washington County are primarily under the jurisdiction of THPRD, and the cities of Beaverton, Tigard, Durham and Tualatin. The trail alignment also runs through areas of unincorporated Washington County: the area between Oleson Road and Scholls Ferry Road, and a portion at the southern end surrounded by Tigard, Durham and Tualatin.
District	Tualatin Hills Park and Recreation District (THPRD)	Provides parks and recreation services to 200,000 residents within 55 square miles of eastern Washington County, including Beaverton.
District	Clean Water Services (formerly Unified Sewerage Agency)	Service district serving ~450,000 residents in 122 square miles of the Tualatin River watershed in urban Washington County and small portions of Portland, Lake Oswego, Multnomah & Clackamas Counties.
City	City of Portland, pop. 529,121 (Multnomah County)	Bureau of Parks and Recreation, Portland Department of Transportation, Bureau of Environmental Services (water quality), and SWTrails Group of Southwest Neighborhoods, Inc. are involved in the project. The alignment runs from Willamette Park in Southwest Portland via various alignments through Southwest Portland to the western city limits.
City	City of Beaverton, pop. 76,159 (Washington County)	Park services in Beaverton are managed by THPRD. The greenway alignment runs along Fanno Creek for 4 miles from Allen Blvd. to Scholls Ferry Rd. at the southern City limits. Street crossings of the trail are managed by the City.
City	City of Tigard, pop. 41,223 (Washington County)	The alignment runs along Fanno Creek from Scholls Ferry Rd. for 4.25 miles to the southern city limits located near Durham Rd.
City	City of Durham, pop. 1,382 (Washington County)	Alignment runs along Fanno Creek to the Tualatin River and makes a loop for a total of 2.25 miles.
City	City of Tualatin, pop. 22,791 (Washington County)	The greenway alignment ends in Tualatin's Community Park after crossing the Tualatin River from Durham on a proposed bike/ped bridge.

PROJECT PARTNERS

The Fanno Creek Greenway Trail is a partnership project involving many public and private organizations, including the cities of Portland, Beaverton, Tigard, Durham and Tualatin; Tualatin Hills Park and Recreation District; Washington County; Clean Water Services; Fans of Fanno Creek; Southwest Neighborhood, Inc.; Audubon Society of Portland; Three Rivers Land Conservancy; 40-Mile Loop Land Trust; National Park Service and Metro.

PROJECT HISTORY

Plans for the Fanno Creek Greenway Trail have been proposed and developed for over 30 years:

1972	Columbia Region Association of Governments (CRAG) "Urban Outdoors Plan" mapped out portions of the greenway and trail.
1974	CRAG produced the "Bikeway Plan for the Columbia and Willamette Region" which included portions of the trail.
1970s	Local Comprehensive Plans and Park/Trail Master Plans
1988	Washington County Transportation Plan
1989	Metro's "Recreation Resource Study and Natural Area Mapping Project"
1992	Metro's "Metropolitan Greenspaces Master Plan / Regional Trails & Greenways System Map"
1994	City of Portland Environmental Overlay Zones
1995	Metro Regional Urban Growth Goals and Objectives / 2040 Concept
1995	Regional Vote Approving Open Spaces Bond Measure (included funds for Fanno Trail)
1995-2002	Purchase of Trail Right-of-Way by Metro
1995-2002	Construction of Trail by local jurisdictions
1995-2002	Federal Transportation Funds allocated to build the trail
1999	City of Tigard Park System Master Plan
1998	Hillsdale Town Center Plan
1998	Tualatin Hills Park and Recreation District Trails Master Plan
1999	Fanno Creek Greenway Trail Working Group established
2000	Metro Regional Transportation Plan (RTP) Update
2000	City of Portland Southwest Trails Plan
2000	Southwest Portland Urban Trails Plan
2000	Southwest Portland Community Plan Policies adopted
2001-2002	Community Outreach / Local Ambassadors program
2001	City of Portland Parks 2020 Vision Plan
2001	Metro's Green Ribbon Committee Funding Recommendations
2002	City of Beaverton Comprehensive Plan and Transportation System Plan
2002	City of Tigard Transportation System Plan
2002	Washington County 2020 Transportation Plan
2002	Metro's Update of Regional Trails and Greenways System Map
2003	Action Plan for Completing Fanno Creek Greenway Trail

AREA HISTORY

Fanno Creek is named after one of Oregon's earliest settlers, Augustus Fanno, a native of Portland, Maine, who settled in the area of 8300 SW Highway 217 in 1847. A 640 acre donation land claim he settled that year was on the lowlands along Fanno Creek. Native Americans used parts of his claim to pick huckleberries; and with their help, he cleared the dense forest and started an onion farm in the rich bottom land. The Fanno family farmed portions of the original claim until 1971, when the last 83 acres was sold. Early settlers of the area were mostly woodsmen, farmers and dairy farmers. The pace of settlement of the Fanno Creek watershed increased with development of the Southern Pacific railway in the late 1800's and the Oregon Electric railway in the early 1900's. Communities with stations along these interurban passenger lines continue to bear the names of the stops, and the location of the old rights-of-way can still be seen on the city zoning maps.

The mouth of Fanno Creek

The route of the Oregon Electric Railway originated at SW Jefferson and Front Street and followed the Interstate Five alignment up out of Portland, along Multnomah Boulevard through Maplewood to Garden Home, where it split into Salem and Forest Grove branches. Most of the 49 mile system was built between 1903 and 1915, with passenger revenues reaching a peak of $891,000 in 1920. The opening of Multnomah Station at SW 35th Avenue and Capitol Highway in Portland in 1908, coupled with the paving of Slavin Road in 1903, opened up the Fanno Creek watershed to more rapid development. Multnomah residents could travel to SW Broadway and Washington Street in 15 minutes on the rail line. The population around Multnomah, Maplewood, Hillsdale, and West Portland Park increased to 2,000 by 1915 when the Portland General Electric Company installed electricity to the area. In 1926 the *Oregonian* described growth in the Multnomah area as "phenomenal," as large numbers of houses were being built for speculation.

The Southern Pacific lines began electrification in 1912, becoming the Red Electric trains. The last train ran in July of 1929, after which Southern Pacific replaced interurban rail passenger service with electric trolley buses. The last full year of inter-urban operations was 1932.

PROJECT SETTING

Topography, Geology, Soils and Precipitation

The approximately 20,510-acre Fanno Creek watershed drains water from the Tualatin Mountain Range, Sexton Mountain and Bull Mountain which flows down to the Tualatin River. There are approximately 117 miles of streams in the Fanno Creek watershed, including two major tributaries (Ash and Summer Creeks) and twelve smaller tributaries.

Fanno Creek at its headwaters drains the southwest portion of the Tualatin Mountains in Portland. The highest part of the Fanno Creek basin is 1,060 feet above sea level at Council Crest, and the upper portion of the watershed contains streams in deep ravines. Fanno Creek and its upper tributaries flow west as they leave the Portland city limits, at which point all creek elevations are less than 300 feet.

The southwest slope of the Tualatin Mountains (commonly known in Portland as the West Hills) is composed mostly of Columbia River Basalt. Basalt flows are exposed in ravines, while in other places the basalt is covered by up to 25 feet of wind deposited silt. Underground streams, or aquifers, are stored in fractured basalt throughout the area.

Fanno Creek watershed soils are mostly silts and clays. Much of the northwestern portion of the watershed is composed of Cascade Silt-loam, a wind-deposited soil that erodes easily and does not absorb storm water very quickly. In the steep headwaters of Fanno Creek, forests hold soil to the sides of the hills; although even in fully vegetated sites, a high natural rate of soil erosion is common.

Hydrology

The Fanno Creek watershed receives approximately 50 inches of precipitation (98% rain and 2% snow) per year. Almost all (88%) this rain falls between October and May, with half the annual total falling in November, December, and January. Fanno Creek has not experienced a 100-year flood since urbanization, although significant flooding did occur in 1977, putting portions of SW 56th, 60th, Oleson Road and the Beaverton-Hillsdale Highway under water. Some stream segments flow to culverts and pipes which are too small to pass a large flood and property could be submerged during such a flood. The majority of the greenway trail is in the 100-year flood plain from Scholls Ferry Rd., south to the Tualatin River. During the 1996 flood many portions of the trail were covered by water.

Vegetation

The Fanno Creek watershed is in a transition area between the Western Hemlock and Willamette Valley vegetation zones. Although western hemlock is the dominant species in the first zone, Douglas fir, western red cedar, or grand fir are just as likely to dominate mature stands. Immature stands have a great deal of red alder and big-leaf maple. The understory is dominated by a lush growth of herb species including sword fern, wild ginger, inside-out flower, Oregon oxalis, trillium, and Smith's fairybells. Understory shrubs include: red huckleberry, Oregon grape, vine maple, red elderberry, wood rose and salmonberry.

Early observations of Portland's forests point to the dynamic pattern of successional stages active within the forest community over the past two centuries. The predominantly old growth coniferous forest that Lewis and Clark recorded in 1806 has been transformed through logging and fire into a younger, mixed hardwood and coniferous forest. Despite these disturbances, signs of a returning western hemlock climax forest are widely apparent. The forest types occurring in the Fanno Creek watershed may be viewed as a sequence of successional stages of forest regeneration following logging and fire.

Fish and Wildlife

The Fanno Creek watershed is used by about one hundred bird species, several small-and-medium sized mammals, and a few fish species. Commonly seen mammals include beaver, raccoon, opossum, spotted skunk, Douglas Squirrel, and Townsend's chipmunk. Occasional visitors include black-tail deer and coyote. There was one coyote sighting in 1993. The last elk sighting was in 1992. The last black bear sighting was about ten years ago. The last cougar sighting was about 30 years ago.

Fanno Creek contains Cutthroat trout. There are different types of these trout, and each type has a distinct life cycle, one of which spends its entire life in small streams and only grows to approximately seven inches. These small fish are full year residents of Fanno Creek and may only migrate a few hundred yards in an entire lifetime. Ocean and lake dwelling cutthroat do not visit Fanno Creek, but an occasional large trout will spawn there. The spawning beds for both these cutthroat types are in the faster, gravel-bottomed headwaters. Flat-land creeks further downstream have mud bottoms that are not suitable for spawning, but are very important for rearing and feeding, especially during seasonal low water and droughts. Other fish species known to be in Fanno Creek include sculpins, dace, and mosquito fish.

III. GAP DESCRIPTIONS

Washington County Commuter Rail

A commuter train is planned to run between Beaverton and Wilsonville on the existing track near the trail. The train will operate on the existing single track. The projected commuter passenger train speed in this area will be 54 mph (Top speed 79 mph). Portland & Western Railroad will continue to operate freight trains on this corridor. (Source: TriMet)

Gap 1: Tualatin River to Durham Rd.

This area is located north of the Tualatin River, at the mouth of Fanno Creek. The existing and planned trail segments will provide connections to the Tualatin River, Tualatin Park, Durham City Park, Cook Park in Tigard, and Tigard High School. The most notable features of this area include the constructed wetlands in Cook Park and the open fields owned by Clean Water Services. Some odors exist near Clean Water Services' Treatment Plant.

Key issues in determining alignment/crossings: property ownership, slope of terrain, connections to existing trails.

Clean Water Services property near the railroad trestle

Gap 2: Durham Rd. to Bonita Rd.

This corridor is primarily an industrial district that parallels Fanno Creek. A number of the properties appear to have vacancies or are otherwise under-utilized. 74th Avenue is a low-volume roadway. The railroad parallels 74th Ave. to the east. This railroad corridor is slated to carry the proposed Washington County Commuter Rail Line. Metro has acquired easements along a number of properties that border Fanno Creek in this section. This section contains a number of wetlands along Fanno Creek.

Key issues in determining alignment/crossings: property ownership, environmental constraints, slope issues, traffic volume.

SW 74th Avenue looking north

Gap 3: Bonita Rd. to Tigard City Hall

The City of Tigard is constructing a new park along Bonita Rd. near the intersection with Milton Court. Gap 3 also encompasses the recently Metro acquired 13-acre Brown-McDonald property. This forested property straddles Fanno Creek and its associated wetlands. To the west of Fanno Creek are residential neighborhoods. The City of Tigard also is constructing a new library between Hall Blvd. and Fanno Creek, just north of Regina Rd.

Key issues in determining alignment/crossings: wetlands, property ownership, connections to planned library.

Existing multi-use path north of Bonita Ave.

Gap 4: Main St. to North Dakota St.

Existing boardwalk near Main St., Tigard

This area in Tigard contains mostly completed segments of the Fanno Creek Greenway Trail as well as a designed and funded segment between Grant St. and Main St. The primary issues in this gap are the trail roadway crossings of: Tiedeman, Tigard, and North Dakota Streets. This segment includes downtown Tigard.

Key issues in determining alignment/crossing treatments: Traffic volume and roadway geometry.

Gap 5: Hall Boulevard Crossing

Bicyclist crossing Hall Blvd. in Beaverton

This gap is essentially a roadway crossing. Currently, there is no crossing treatment (signalized or unsignalized) for trail users that wish to cross Hall Boulevard, a wide, high-volume roadway. The Fanno Creek Farmhouse is located south of Hall Blvd. along Creekside. Users may use the intersection at Greenway, which is roughly 400' west of the trail. Signal warrants exist at Creekside to the east, but a trail though the office center parking lots to the north of Creekside may be difficult to implement. A bicycle-pedestrian bridge over Hall, however expensive, may provide the safest crossing treatment for trail users.

Key issues in determining alignment/crossing treatments: Safely crossing Hall, traffic volume and roadway geometry, feasibility of trail easement acquisition.

Gap 6: Denney Rd. to 92nd Ave.

Existing path east of SW 92nd looking at intersection with SW Allen Blvd.

Gap 6 is situated next to Hwy. 217 in Beaverton. The first gap exists between the existing trail south of Denney Rd. and the newly completed trail north of Denney Rd. on the Greenwood Inn property. The second gap parallels Fanno Creek to the south of commercial properties along Allen Blvd. This gap should be completed by the fall of 2004.

Key issues in determining alignment/crossing treatments: Traffic volume, vehicular turning movements, safe crossing of Highway 217.

Gap 7 marks the beginning of the Portland section of the Fanno Creek Greenway Trail. These trails mainly consist of on-street walking routes. Some of the streets contain sidewalks and others require the "trail" user to walk along the roadway. The designated bike route primarily follows Multnomah Boulevard, which has existing, striped bike lanes. However, the volume of traffic is relatively high, making this route inappropriate for less experienced riders. The proposed Red Electric Trail, being studied by the City of Portland, will potentially provide a multi-use path connection through SW Portland.

Gap 7: Garden Home to SW 60th

"Demand" path to Fanno Creek Trail from the Frank Estate Apartments

Walking Route: Gap 7 exists at the border between Multnomah and Washington County in the Garden Home area. Gap 7 is the first segment to veer away from the Fanno Creek. The area is primarily residential and the on-street route follows local, low-traffic volume roadways. The off-street route will connect to the existing Fanno Creek Trail near the Garden Home Recreation Center. The trail will need an easement on private property to connect to Vermont Street and eventually the Red Electric Trail. During fall of 2002, improvements to Oleson Rd. were being planned and designed by Washington County. Existing destinations in this area include the Garden Home Recreation and sports fields, Oregon Episcopal School, and a shopping complex.

Biking Route: The biking route follows Oleson Rd. to Garden Home, and then to Multnomah Blvd. Multnomah has striped bike lanes and is signed as a bike route. Due to relatively high traffic volume and speed, this route may not be appropriate for novice or young bicyclists.

Key issues in determining alignment/crossing treatments: Traffic volume and geometry, sight distance, previous designation in Portland's *Southwest Urban Trails Plan.*

Gap 8: SW 60th to Gabriel Park

SW Maplewood near the elementary school

Walking Route: This route continues through a residential neighborhood between April Hill Park and Gabriel Park using local residential streets. Steep slopes exist east of April Hill Park. The trail passes by Maplewood Elementary School. SW Maplewood has a 50' right-of-way and could be improved with a sidewalk.

Biking Route: The biking route continues along Multnomah Blvd.

Key issues in determining alignment/crossing treatments: Traffic volume and geometry, sight distance, existing designated route in *Southwest Urban Trails Plan.*

Gap 9: Gabriel Park to SW Bertha Blvd.

Entrance to Wilson High School

Walking Route: East of Gabriel Park, the walking route passes through a residential neighborhood and follows Nevada with the exception of the crossing of Capitol Highway. Here, because of grade issues, a bicycle-pedestrian bridge would provide the most safest crossing for trail users. If a bicycle-pedestrian bridge proves to be unfeasible due to engineering issues or right-of-way restrictions, stairs and a marked mid-block crosswalk (accompanied by signs alerting drivers) would improve the Capitol Highway crossing. In absence of either treatment, users will need to cross Capitol Hwy. using Texas St. to the north. Adjacent to the Greater Portland Bible Church, the route will use the existing gravel trail on unbuilt Nevada St. right-of-way. Heading east, the route will cross Capitol Hill Rd. and pass through Stephens Creek Park before crossing Bertha Blvd.

Biking Route: The biking route continues along Multnomah Blvd. until the intersection with SW 25th. Because of the difficult crossing at the intersection with Barbur, eastbound bicyclists can head south on SW 25th and SW 24th, and then head east on SW Barbur Blvd.

Key issues in determining alignment/crossing treatments: Traffic volume and geometry, elevation differences, right-of-way ownership, existing designated routes in *Southwest Urban Trails Plan.*

Gap 10: SW Bertha Blvd. to SW Terwilliger (at George Himes Park)

Unbuilt right-of-way near George Himes Park

Walking Route: After crossing Bertha Blvd., the walking route will use existing sidewalks and an existing crossing at Vermont St. onto an existing path on Wilson High School property. The route will use the roadway of SW Burlingame Ave. and SW Burlingame Place. The route will then follow the undeveloped SW Terwilliger Place right-of-way to access the entrance to George Himes Park, where a soft-surface path exists.

Biking Route: The biking route follows the bike lanes on SW Barbur Blvd. to SW Miles St.. The route follows SW Miles to SW Brier St (which are relatively low-volume streets without bike lanes).

Key issues in determining alignment/crossing treatments: Traffic volume and geometry, sight distance, existing designated routes in Southwest Urban Trails Plan.

Gap 11: SW Terwilliger (at George Himes Park) to Willamette Park (at SW Nebraska)

Entrance to pedestrian stairs near I-5

Walking Route: From SW Terwilliger (at George Himes Park) to Willamette Park (at SW Nebraska), the pedestrian path goes under one of the oldest wooden bridges still in active use. Passing under Barbur and I-5, down about 100 steps to SW Iowa, SW Corbett, SW Carolina, SW Virginia and SW Nebraska Streets to the Willamette Park.

Biking Route: Following SW Brier Place, SW Custer, SW Corbett, SW Laview, SW Taylors Ferry and SW Miles.

Key issues in determining alignment/crossing treatments: Traffic volume and geometry, sight distance, existing designated routes in *Southwest Urban Trails Plan.*

Table 1: Trail-Roadway Intersections

Roadway	Current Crossing Treatment	Number of Lanes	Sight Distance	Road Width	Posted Speed	Traffic Volume (Daily Average)	Sidewalks		Bike Lanes		Recommended Treatment
TIGARD											
Durham Rd. (at 74th)	None	3	Good	48'	35	High (15,900)	6'	6'	5' (s)	4' (n)	Type III
Durham Rd. (at 85th)	Signal (no crosswalk on east side)	3	Good	48'	35	High (16,000)	6'	6'	5'	5'	Use Existing Signal
Bonita Rd.	None (crosswalk planned)	3	Good	40'	30-40	High (13,900)	6'	6'	5'	5'	Planned Type I crossing w/ overhead warning
Hall Blvd.	None	2	Good	42'	40	High (16,000)	None		6' (e)	11' (w)	Type III with median
Main St.	Crosswalk	2	Good	37'	20	Med	8'	8'	None		None (existing Type 1)
Grant St.	None	2	Good	31'	20-30	Low	None		5'(s)	-	Type I
Tiedeman St.	None	2	Fair	43'	25	Med (6000)	6'	6'	5'(n)	-	Type I- with median and overhead warning
Tigard St.	None	2	Good	22'	35	Med (3900)	None		None		Type I
North Dakota St.	None	2	Good	20'	25-30	Med (4000)	None		None		Type I
BEAVERTON											
Hall Blvd.	None (410' to signal)	5	Good	60'	40	High (27,000)	6'	6'	None		TypeII (Greenway)
Denney Rd.	None	3	Good	40'	35	High (14,400)	7' (s)	8' (s)	None		Type IV
Scholls Ferry Rd.	Signal	3	Good	40'	30	High (19,100)	5'	5'	None		
92nd	Crosswalk	2	Good	46'	35	Med	5'	5'	None		Type III
Allen Blvd	Signal at Scholls Ferry	2,3	Good	63' narrows near 92nd	35	High	7' (s)	5' (n)	None		
WASHINGTON COUNTY											
Oleson Rd.	Signal at Garden Home	3	Fair	40'	35	High (13,000)	6'	6'	None		Type II-Garden Home
PORTLAND											
Maplewood	None	2	Fair	20'	25	Low (1250)	None		None		Type I
SW 45th	None	2	Good	20'	30	Med (7290)	None		None		Type I
Capitol Hwy.	None	2	Fair	28'	30	Med (9760)	-	5'(e)	-	5'(e)	Type II Texas St.; Type I w/ overhead warning
Capitol Hill Rd.	None	2	Poor	20'	30	Med	None		None		Type I w/ overhead warning
Bertha Blvd.	None	3	Good	36'	30	High (15,200)	6'	6'	5'	5'	Type I w/ median and overhead warning

Treatments:

Type I: Unprotected mid-block crossing
Type II: Divert to Signalized Intersection
Type III: Signalized Crossing
Type IV: Grade Separated (undercrossing or overcrossing)

IV. IMPLEMENTATION MEASURES

Implementation measures for the Fanno Creek Greenway Trail are outlined in the following matrix, organized by gap.

FANNO CREEK GREENWAY ACTION PLAN IMPLEMENTATION MEASURES

		Implementation Measures								Capital Costs (Excludes Property Acquisition/Easement)			
Gap #	**Segment/ Intersection**	**Type**	**Description**	**Acquisition/ Easement**	**Right-of-Way Improvement**	**Other**	**Length (miles)**	**Ease of Implementation**	**Responsibility**	**Trail Costs**	**Crossings**	**Signs, Bollards, Trailhead or Other**	**Total Cost**
Gap 1: Tualatin River to Durham Rd. -- Durham to Tigard													
1	A-B: Build a Bike-Ped Bridge over Tual. River next to existing railroad bridge	Bridge	Two options have been studied to provide a bike/ped crossing. The preferred option calls for a single bridge that diagonally spans the Tualatin River. Would connect Tigard, Durham, and Tualatin.	To be determined		River crossing	400'	Difficult	City of Durham, City of Tigard, City of Tualatin, Wash. Co., Metro	$250,000	$ 1 million	$300	$1,250,300
1	B-C: Tualatin River Path	Off-street	This alignment will follow the Tualatin River. An earthen trail exists, but a regional (paved) muti-use trail will need to be set back from the riparian area to avoid wetlands and meet Metro's Title 3 requirements.				0.3	Moderate	City of Tigard	$157,500		$600	$158,100
1	C-E: Cook Park Path	Existing											
1	E-F: 85th Ave	On-street	This segment connects Durham Rd. and the existing path on the Clean Water Services property.		Wayfinding		0.4	Easy	City of Durham, City of Tigard			$2,500	$2,500
1	F-G: Durham Rd.	On-street	This segment uses the sidewalks and bike lanes on Durham Rd.		Wayfinding		0.4	Easy	City of Tigard			$600	$600
1	H-J: Fanno Creek Alignment	Existing											
1	J-G: Fanno Creek Alignment	Off-street	This alignment begins at the recently completed Durham Park Loop Trail and would cross Fanno Creek four times. Will cross railroad using existing underpass.	Negotiate easements with Taylor, Bartlett,	Wayfinding	Wetlands delineation, mitigation. Four creek crossings.	0.4	Difficult	City of Tigard, Clean Water Services	$210,000	$180,000	$1,200	$391,200
1	H-D: Clean Water Services Connector	Off-street	This segment would connect the Durham Park path and the Cook Park path.	Negotiate with CWS			0.1	Easy	City of Tigard, Wash. Co. Clean Water Services	$52,500		$600	$53,100
1	B-I: Durham Park-Clean Water Services Path	Existing											
1	i-1 Durham Rd. (at 74th)	Crossing-Roadway	A signal at this intersection would allow users to cross Durham Rd., which carries over 15,000 cars each day.		Signalized			Moderate	City of Tigard	$150,000		$600	$150,600
Gap 2: Durham Rd. to Bonita Rd.													
2	A-B: Fanno Creek Alignment	Off-street	This alignment follows the Fanno Ck. riparian corridor to the west of the industrial properties on 74th. Steep slopes may require cantilevering sections of this trail.	Easements w/ multiple properties	Wayfinding	Wetlands delineation	1.1	Difficult	City of Tigard	$577,500		$1,200	$578,700
2	A-C: 74th Ave.	On-street	This option follows 74th where traffic volumes are low.		Wayfinding		0.8	Easy	City of Tigard			$900	$900
2	A-C: Rail with Trail	Off-street	This option would use the rail ROW to provide an off-street path adjacent to the future commuter rail line.	Easement w/ ODOT & coordination w/ Commuter Rail plans	Wayfinding		1.1	Moderate	City of Tigard	$577,500		$1,200	$578,700
2	i-2 Bonita Rd.	Crossing-Roadway	This crossing will allow nearby residents to safely cross Bonita.		Planned Mid-Block crossing w/ pedestal warning			Construction planned for 2003 (funded)	City of Tigard				

		Implementation Measures								Capital Costs (Excludes Property Acquisition/Easement)			
Gap #	**Segment/ Intersection**	**Type**	**Description**	**Acquisition/ Easement**	**Right-of-Way Improvement**	**Other**	**Length (miles)**	**Ease of Implementation**	**Responsibility**	**Trail Costs**	**Crossings**	**Signs, Bollards, Trailhead or Other**	**Total Cost**
Gap 3: Bonita Rd. to Tigard City Hall -- Tigard													
3	B-K: Milton Court				Existing							$225	$225
3	K-G: Fanno Creek Alignment	Off-street	This alignment would take users through the Metro-owned "Brown-McDonald" property and continue behind the proposed site for the Tigard Library.	Fields Properties	Wayfinding	Wetlands delineation, mitigation	0.7	difficult	City of Tigard, Metro	$367,500		$1,200	$368,700
3	B-G: Bonita to Hall	On-street	This option would travel along Bonita and cut across Fanno Creek Drive to Hall Blvd. Bike lanes and sidewalks exist on Bonita and one side of Hall.		Wayfinding		1.2	Easy	City of Tigard			$5,000	$5,000
3	I-H: Library Connection	Off-street	This connection would connect the existing multi-use path and the future Tigard Library.	Solares, Zander, Fields Properties	Wayfinding	One creek crossing	0.3	Moderate	City of Tigard	$157,500	$50,000	$500	$208,000
3	H-G Library to Hall Connection	Off-street	This segment would connect the future library to Hall Blvd.				0.3	Moderate	City of Tigard	$157,500		$500	$158,000
3	JJ-KK Bridge Connection	Off-street	This path and bridge would connect the existing path with the proposed path on the east side of Fanno Creek.			One creek crossing	0.1	Difficult	City of Tigard	$52,500	$50,000		$102,500
3	i-3: Hall Crossing	Crossing-Roadway	A signal at this intersection would allow users to cross Hall Blvd., which carries over 16,000 cars each day at this location.		Signalized with median			Moderate	City of Tigard		$180,000	$2,000	$182,000
Gap 4: Main St. to North Dakota St. -- Tigard													
4	B-C: Main to Pacific Hwy. Undercrossing	Off-street	The City of Tigard received a grant to upgrade the existing 4' path in this section				250'	Planned for construction in 2003	City of Tigard				
4	C-D: Pacific Hwy. to Grant	Off-street	This off-street alignment would parallel Fanno Creek behind the Morlan and Ball Properties.	Ball Property			0.2	Moderate	City of Tigard	$105,000			$105,000
4	D-E: Grant to Woodard Park	On-street	This connection uses Grant St. and Johnson St., two low volume streets.		Wayfinding		0.3	Easy	City of Tigard			$5,000	$5,000
4	D-I: Fanno Creek Route-west	Off-street	Runs along the west side of Fanno Creek.	3 properties			0.3	Difficult	City of Tigard	$275,000		$1,200	$276,200
4	D-I: Fanno Creek Route-east	Off-street	Runs along the east side of Fanno Creek.	4 properties			0.3	Difficult	City of Tigard	$350,000		$1,200	$351,200
4	F: Tiedeman	Trailhead	Trailhead off of Tiedeman on Metro Property would provide parking for 6-8 cars					Moderate	City of Tigard, Metro			$250,000	$250,000
4	i-4 Grant St.	Crossing-Roadway	A striped mid-block crossing would allow pedestrians to cross safely.		Mid-Block			Easy	City of Tigard		$6,000	$2,000	$8,000
4	i-5 Tiedeman St.	Crossing-Roadway	This crossing would have users cross Tiedeman to the west of Fanno Creek. Bike lanes and sidewalks exist on this portion of Tiedeman. A median would allow users to cross one side of the street at a time. Curb cuts are necessary. An overhead warning is needed due to the limited sight-distance.		Mid-Block, with median and overhead warning.			Moderate	City of Tigard		$120,000	$4,000	$124,000
4	i-6 Tigard St.	Crossing-Roadway	A striped mid-block crossing would alert drivers of the trail crossing here.		Mid-Block			Easy	City of Tigard		$6,000	$2,000	$8,000
4	i-7 North Dakota St	Crossing-Roadway	A striped mid-block crossing would alert drivers of the trail crossing here.		Mid-Block			Easy	City of Tigard		$9,500	$3,000	$12,500
Gap 5: Hall Blvd. Crossing -- Beaverton													
5	F-E: Creekside	On-street	This new route would encourage trail users to access the Fanno Creek Trail at the Fanno Farmhouse. A signal is warranted at Creekside.		Wayfinding		0.1	Easy	City of Beaverton, THPRD			$600	$600
5	E-D: Parking Lot Route	On-street	This route would go through the Blackstone properties and access a bridge over Fanno Creek north of Hall.	Blackstone Properties (easement needed)	Wayfinding		0.2	Difficult	City of Beaverton, THPRD	$8,000		$4,000	$12,000

		Implementation Measures								Capital Costs (Excludes Property Acquisition/Easement)			
Gap #	**Segment/ Intersection**	**Type**	**Description**	**Acquisition/ Easement**	**Right-of-Way Improvement**	**Other**	**Length (miles)**	**Ease of Implementation**	**Responsibility**	**Trail Costs**	**Crossings**	**Signs, Bollards, Trailhead or Other**	**Total Cost**
5	i-8 Hall Blvd. Crossing - Alternate	Crossing-Roadway alternate	A signal at Creekside is warranted due to traffic on Hall. This would provide a safe place for Fanno Trail users to cross Hall Blvd.		Signalized with median			Difficult	City of Beaverton		$225,000	$4,000	$229,000
5	i-8 Hall Blvd. Crossing	Crossing-Roadway	A new bike-ped bridge would be constructed to take trail users over Hall Boulevard		Bike-ped bridge			Difficult	City of Beaverton		$750,000		$750,000
Gap 6: Denney Rd. to SW 92nd. -- Beaverton													
6	C-E: Hwy 217 Bike-Ped Bridge	Crossing-Roadway	This option calls for a new bike-ped bridge over Hwy. 217 that accommodates bicyclists and pedestrians safely.	Negotiation with ODOT		Highway Overpass, Stream crossing	0.3	Difficult	ODOT, City of Beaverton, THPRD, Metro		$1,750,000		$1,750,000
6	E-F: 105th Off-street	Off-street	This path would parallel the roadway and connect with either Denney Rd. or a new bike-ped bridge.	Negotiation with ODOT			0.1	Medium	THPRD, City of Beaverton, ODOT	$55,000		$600	$55,600
6	F-G: Greenwood Inn	Existing											
6	B-F: Denney Rd. to Greenwood Inn	On-street	This portion follows Denney and 105th.		Add bike lanes and improve sidewalks		0.5	Medium	THPRD, City of Beaverton	$51,042		$600	$51,642
6	G-H: Greenwood Inn to Beaverton Maintenance Facility	Off-street	This segment would follow Fanno Creek behind a number of industrial properties on Allen Blvd. Easements in negotiation.	Numerous properties including Goodman and Schnitzer properties	Wayfinding	Wetlands delineation and mitigation	0.5	Moderate	THPRD, Metro	$1,200,000		$1,000	$1,201,000
6	I-J: Allen Blvd	Off-street	A path would provide a route between 92nd and Scholls Ferry.	Possible acquisition/ easement of Wilson, McWilliams properties	Sidewalk widening		0.1	Difficult	City of Beaverton, Metro	$30,000		$600	$30,600
6	i-9 Denney Rd.	Crossing-Roadway	This crossing crosses Denney Road by looping users under the Denney Rd. overpass and alongside Fanno Creek.	Negotiation with Clean Water Services	Grade-Separated Boardwalk	Wetlands delineation, mitigation	0.2	Difficult	City of Beaverton		$135,000	$2,000	$137,000
6	i-10 92nd	Crossing-Roadway	Multiple crossing issues: intersection redesign study should identify intersection and trail crossing issues and propose appropriate long-term solutions.		Potential roadway re-alignment			Moderate	City of Beaverton, Washington Cty.			$50,000	$50,000
Gap 7: Garden Home to SW 60th -- Beaverton to Portland													
7	A-B: Firlock to Vermont	Off-street	This connection would cut through the Frank Estates and follow Firlock along Oregon Episcopal School property to SW Vermont St.	Frank Estates, OES	Wayfinding		0.9	Difficult	THPRD, City of Beaverton	$540,000		$1,200	$541,200
7	B-C: Vermont	Off-street	This route would follow the unbuilt Vermont St. right-of-way.		Upgrade Vermont St.		0.4	Difficult	City of Beaverton	$240,000		$600	$240,600
7	H-C: Oleson Rd.	Off-street	This segment would follow Oleson Rd. and be constructed along with other roadway improvements.		Wayfinding, bike lanes and sidewalk/multi-use path		0.7	Moderate	Washington County (funding has been reserved)	Planned Im.			
7	D-F: SW Canby	On-street	This connection follows SW Canby east to 64th		Wayfinding		0.7	Easy	THPRD, City of Beaverton			$600	$600
7	E-G: SW 68th	On-street	This segment provides a bicycle connection between SW Multnomah and Canby.		Wayfinding		0.3	Easy	City of Portland	$9,000		$600	$9,600
7	i-11 Multnomah and Garden Home	Crossing-Roadway	Add traffic signal to intersection- warrants exist to provide signal					Difficult	City of Portland		$150,000		$150,000

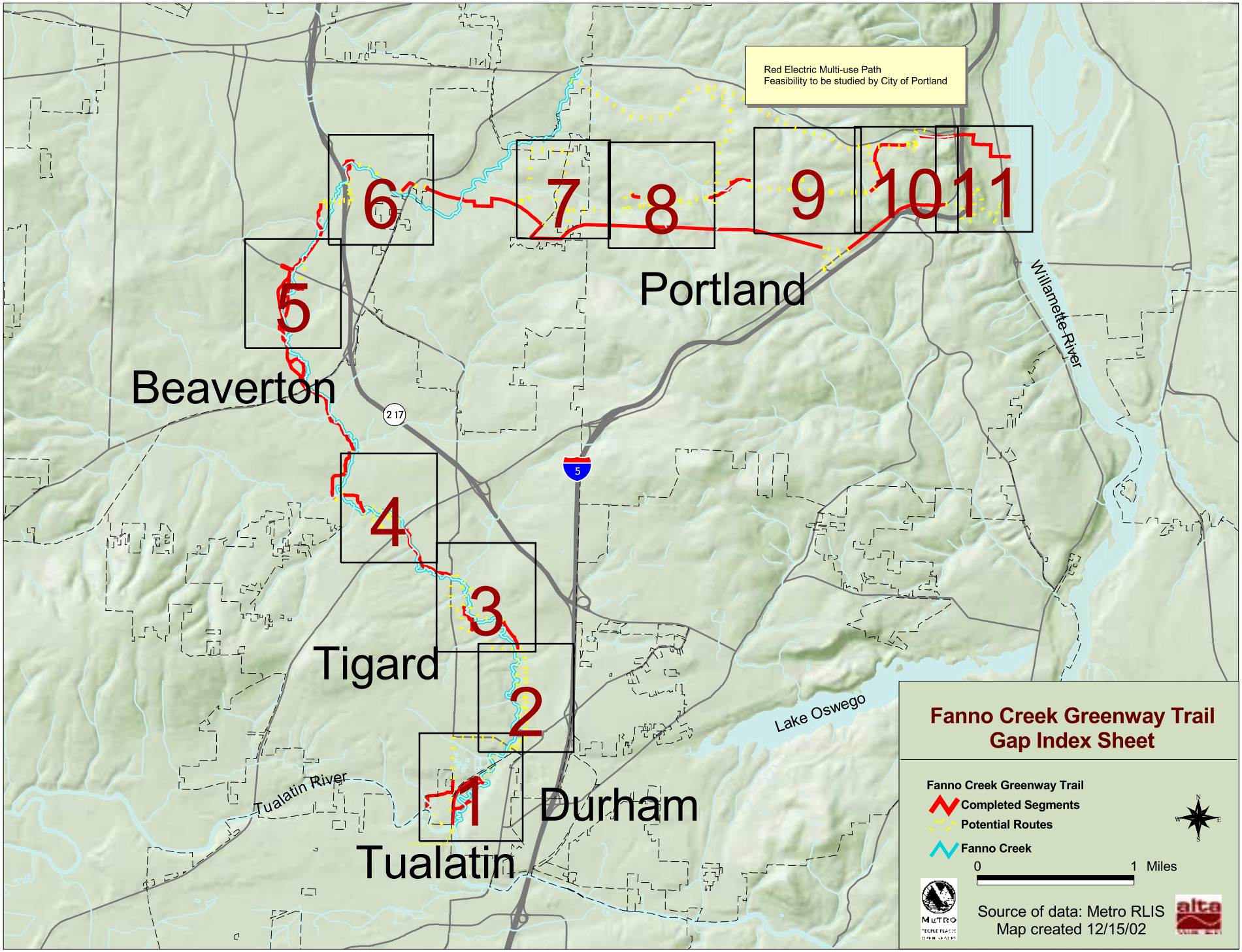
		Implementation Measures								Capital Costs (Excludes Property Acquisition/Easement)			
Gap #	**Segment/ Intersection**	**Type**	**Description**	**Acquisition/ Easement**	**Right-of-Way Improvement**	**Other**	**Length (miles)**	**Ease of Implementation**	**Responsibility**	**Trail Costs**	**Crossings**	**Signs, Bollards, Trailhead or Other**	**Total Cost**
Gap 8: SW 60th to Gabriel Park -- Portland													
8	A-B: SW Canby to April Hill Park	On-street	This connection makes use of an existing trail in April Hill Park		Wayfinding		0.6	Easy	City of Portland			$600	$600
8	A-D: April Hill Park	Off-street, On-street	Walking Path: This route cuts across the southern section of April Hill Park.		Wayfinding	Environmental issues	0.1	Difficult	City of Portland	$60,000		$300	$60,300
8	C-E: Custer/ Maplewood/Miles	On-street	This connection is primarily on-street, with a 0.1 mi gravel off-street section on MCC property.	Multnomah Comm. Church-Easement	Wayfinding, sidewalk improvements on Maplewood		0.7	Moderate	City of Portland	$60,000		$600	$60,600
8	E-F: MCC to Gabriel Park	Off-street	A short walking path is needed to connect from the Multnomah Com. Church to Gabriel Park.		Gravel path	Stairs on steep slopes	0.1	Difficult	City of Portland, SW Trails	$40,000		$300	$40,300
8	i-12 Maplewood	Crossing-Roadway	A striped mid-block crossing		Mid-Block			Easy	City of Portland		$7,500		$7,500
8	i-13 SW 45th	Crossing-Roadway	A striped mid-block crossing		Mid-Block			Easy	City of Portland		$7,500		$7,500
Gap 9: Gabriel Park to SW Bertha -- Portland													
9	G-H: Nevada	On-street	This route follows Nevada		Wayfinding		0.3	Easy	City of Portland			$1,200	$1,200
9	H-K: Capitol Hwy at-grade crossing @ Texas	On-street/ Alt. Crossing	This route diverts users north to cross Capitol Hwy.		Wayfinding		0.2	Easy	City of Portland		$7,500	$1,200	$8,700
9	L-M: Greater Portland Bible Church to SW Bertha	On-street	This portion uses the unbuilt Nevada St ROW.	Coordination with Portland Parks and BES	Nevada St. ROW improvements Wayfinding	Bridge over wetlands in Stephens Creek	0.4	Moderate	City of Portland, SW Trails	$24,000	$75,000		$99,000
9	M	Trailhead	A small trail head off of Bertha could provide trail parking for 4-5 cars									$200,000	$200,000
9	A-B-C: Multnomah Blvd.	Bike Route On-street	This bike route provides a way for bicyclists to travel between SW Barbur and Multnomah Blvds. Westbound cyclists can ride straight to Multnomah, but eastbound cyclists will divert south along 24th and 23rd to reach Barbur.		Wayfinding		n/a	Easy	City of Portland			$10,000	$10,000
9	i-14 Capitol Hwy.	Crossing-Roadway	A bike-ped bridge would allow users to cross Capitol Hwy., overcoming grade issues. If infeasible, stairs and a miblock crossing would improve the crossing.	Property to east of Capitol Hwy.				Difficult	City of Portland		$300,000		$300,000
9	i-15 Capitol Hill Rd.	Crossing-Roadway	A striped mid-block crossing with overhead warning due to traffic volumes		Mid-Block w/ overhead warning			Moderate	City of Portland		$60,000		$60,000
9	i-16 Bertha Blvd.	Crossing-Roadway	A striped mid-block crossing with overhead warning and median. The median acts as a pedestrian refuge for pedestrians crossing Bertha.		Mid-Block w/ median and overhead warning			Moderate	City of Portland		$90,000		$90,000
Gap 10: SW Bertha to George Himes Park -- Portland													
10	A-B: Bertha to Wilson HS	On-street	This route follows sidewalks on Chestnut and SW 13th to Wilson HS.		Wayfinding		0.5	Easy	City of Portland			$600	$600
10	C-D: Burlingame Pl.	On-street	This segment follows the low volume street.		Wayfinding		0.1	Easy	City of Portland			$300	$300
10	D-E: SW Terwilliger Pl.	Off-street	Gravel Trail: This route follows an unbuilt ROW between residential properties. This ROW exists on an extremely steep grade (30%).		Communicate w/ surrounding neighbors, build stairs due to steep slope		0.1	Moderate	City of Portland, SW Trails	$25,000			$25,000
10	E-F: SW Terwilleger	On-street	This short segment follows the roadway to George Himes Park.		Wayfinding		0.1	Moderate	City of Portland			$300	$300

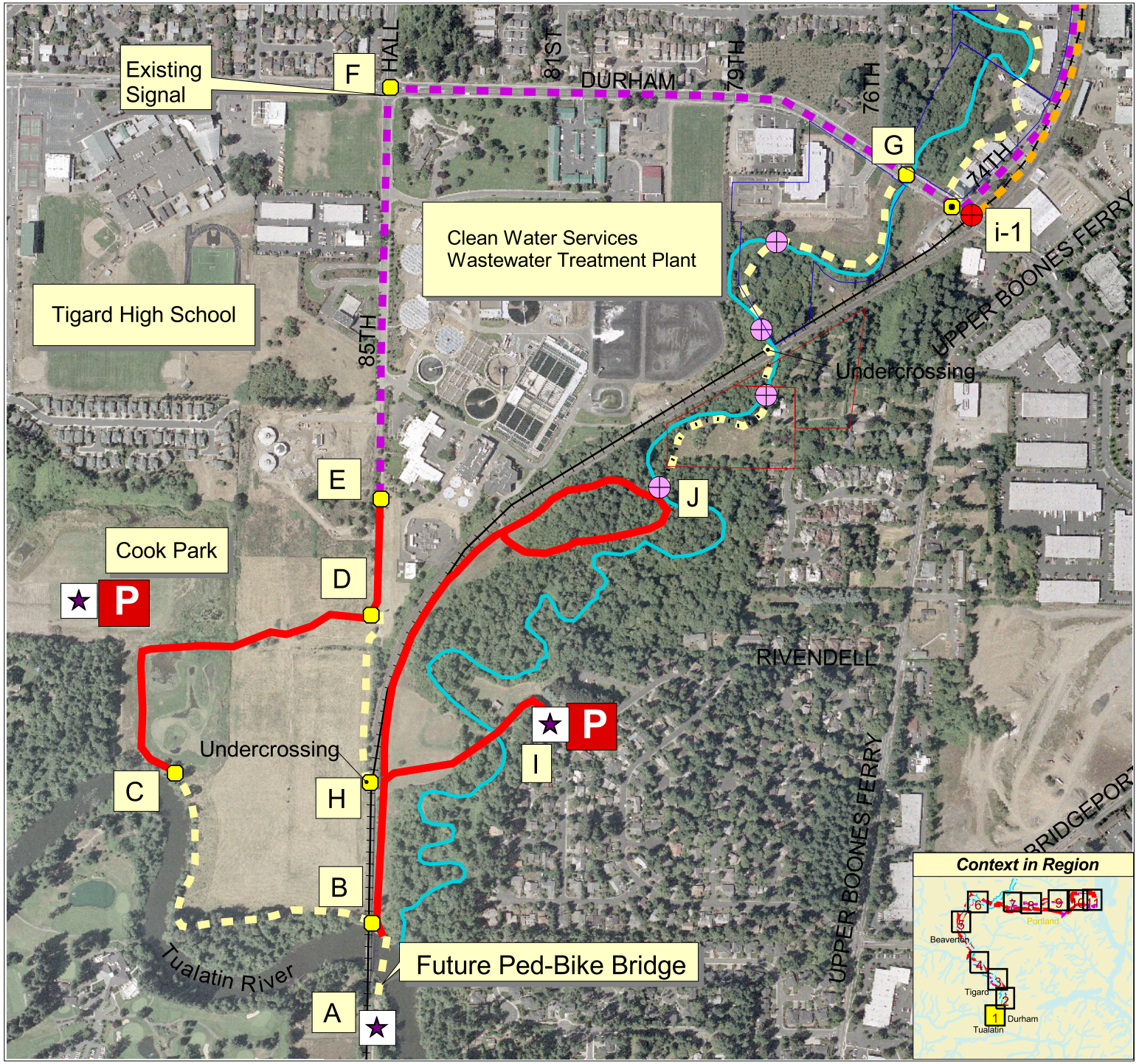
		Implementation Measures								Capital Costs (Excludes Property Acquisition/Easement)			
Gap #	**Segment/ Intersection**	**Type**	**Description**	**Acquisition/ Easement**	**Right-of-Way Improvement**	**Other**	**Length (miles)**	**Ease of Implementation**	**Responsibility**	**Trail Costs**	**Crossings**	**Signs, Bollards, Trailhead or Other**	**Total Cost**
10	G-H: Miles Bike Route	Bike Route On-street	This route connects Barbur and Miles.		Wayfinding		0.4	Easy	City of Portland			$1,000	$1,000
10	i-17: Terwilliger Crossing	Crossing-Roadway	A striped mid-block crossing with overhead warning due to traffic volumes. Sight distance may limit crossing treatment.		Mid-Block w/ overhead warning			Moderate	City of Portland			$40,000	$40,000
Gap 11: George Himes Park to Willamette Park -- Portland													
11	A-B: George Himes Park to Willamette Park	Off-street	This walking route crosses I-5, descends a flight of stairs, and travels on neighborhood streets to Willamette Park.		Wayfinding		0.9	Easy	City of Portland			$600	$600
11	H-I: Brier to Miles	On-street	The winding route includes a 300' elevation gain.		Wayfinding		1	Easy	City of Portland			$2,000	$2,000

TOTAL **$11,553,967**

V. MAPS

The following maps describe implementation of the Fanno Creek Greenway Action Plan, ordered by gap.


Red Electric Multi-use Path
Feasibility to be studied by City of Portland
1
2
3
4
5
6
7
8
9
10
11
Portland
Beaverton
Tigard
Durham
Tualatin
Willamette River
Tualatin River
Lake Oswego
217
5
Fanno Creek Greenway Trail
Gap Index Sheet
Fanno Creek Greenway Trail
Completed Segments
Potential Routes
Fanno Creek
0
1 Miles
Source of data: Metro RLIS
Map created 12/15/02



Fanno Creek Greenway Trail Action Plan

1 Tualatin River to Durham Rd.

LEGEND

Proposed Wayfinding Markers
- Information Map/Kiosk
- Signs
- Pavement Markings

Trailhead Parking
- P Current
- P Proposed

Proposed Crossing Treatments
- Roadway Crossing
- Roadway Crossing-Signal
- Stream Crossing

Fanno Trail Alignment
- Preferred Off-street
- Preferred On-street
- Alternate Route
- Completed Route
- Trail Requires Easement
- Railroad
- Fanno Creek

Property Ownership
- Easement Needed
- Easement Acquired

0 500 Feet

Map created: December 15, 2002
Source of data: Metro RLIS

METRO

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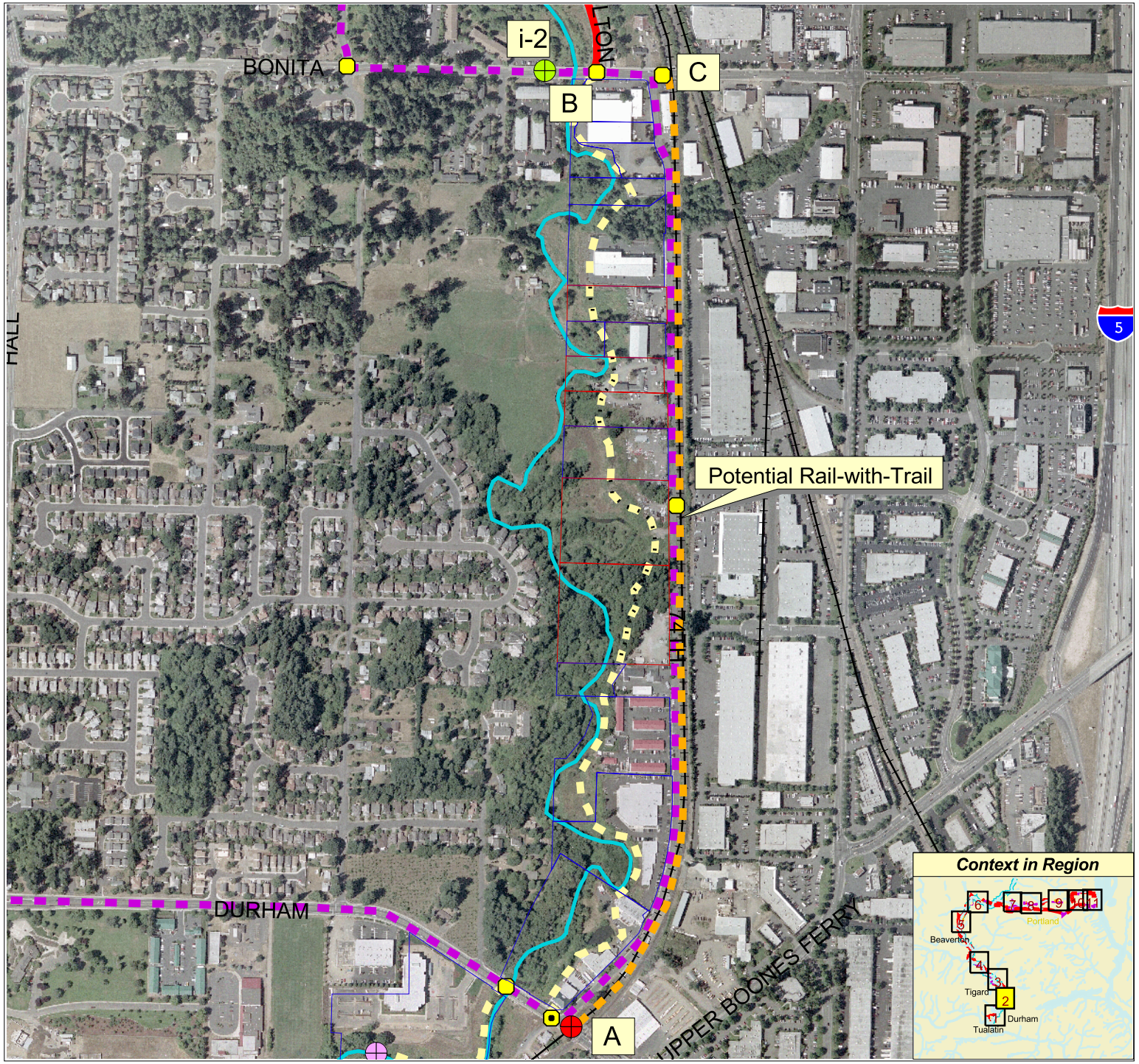

Fanno Creek Greenway Trail Action Plan

2 Durham Rd. to Bonita Rd.

LEGEND

Proposed Wayfinding Markers
- Information Map/Kiosk
- Signs
- Pavement Markings

Trailhead Parking
- P Current
- P Proposed

Proposed Crossing Treatments
- Roadway Crossing
- Roadway Crossing-Signal
- Stream Crossing

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- Railroad
- Fanno Creek

Property Ownership
- Easement Needed
- Easement Acquired

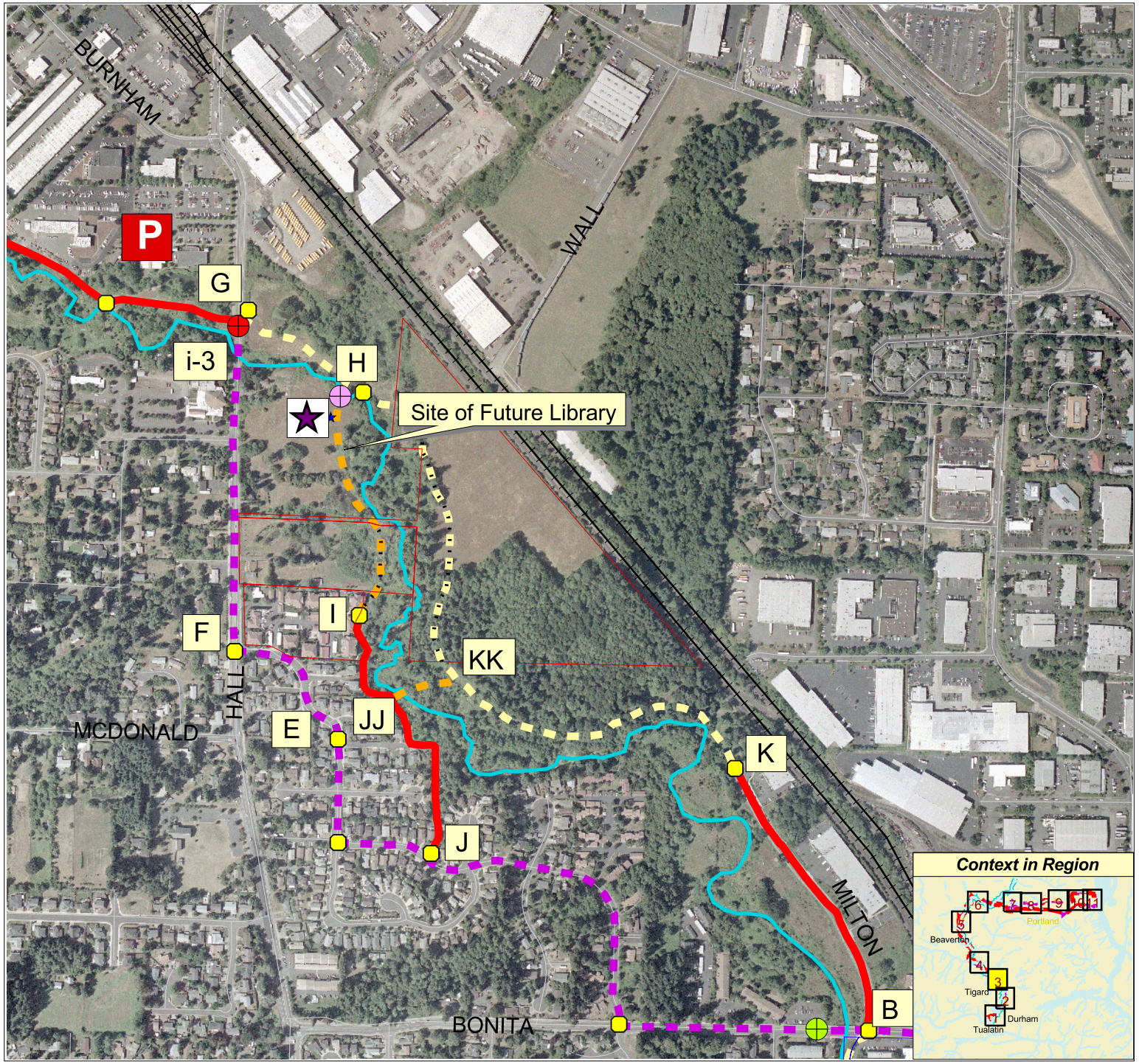
0 500 Feet

Map created: December 15, 2002
Source of data: Metro RLIS

METRO

N W E S

alta



Fanno Creek Greenway Trail Action Plan

3 Bonita Rd. to Tigard City Hall

LEGEND

Proposed Wayfinding Markers
- Information Map/Kiosk
- Signs
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Trailhead Parking
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- P Proposed

Proposed Crossing Treatments
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- Roadway Crossing-Signal
- Stream Crossing

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- Railroad
- Fanno Creek

Property Ownership
- Easement Needed
- Easement Acquired

0 500 Feet

Map created: December 15, 2002
Source of data: Metro RLIS

METRO

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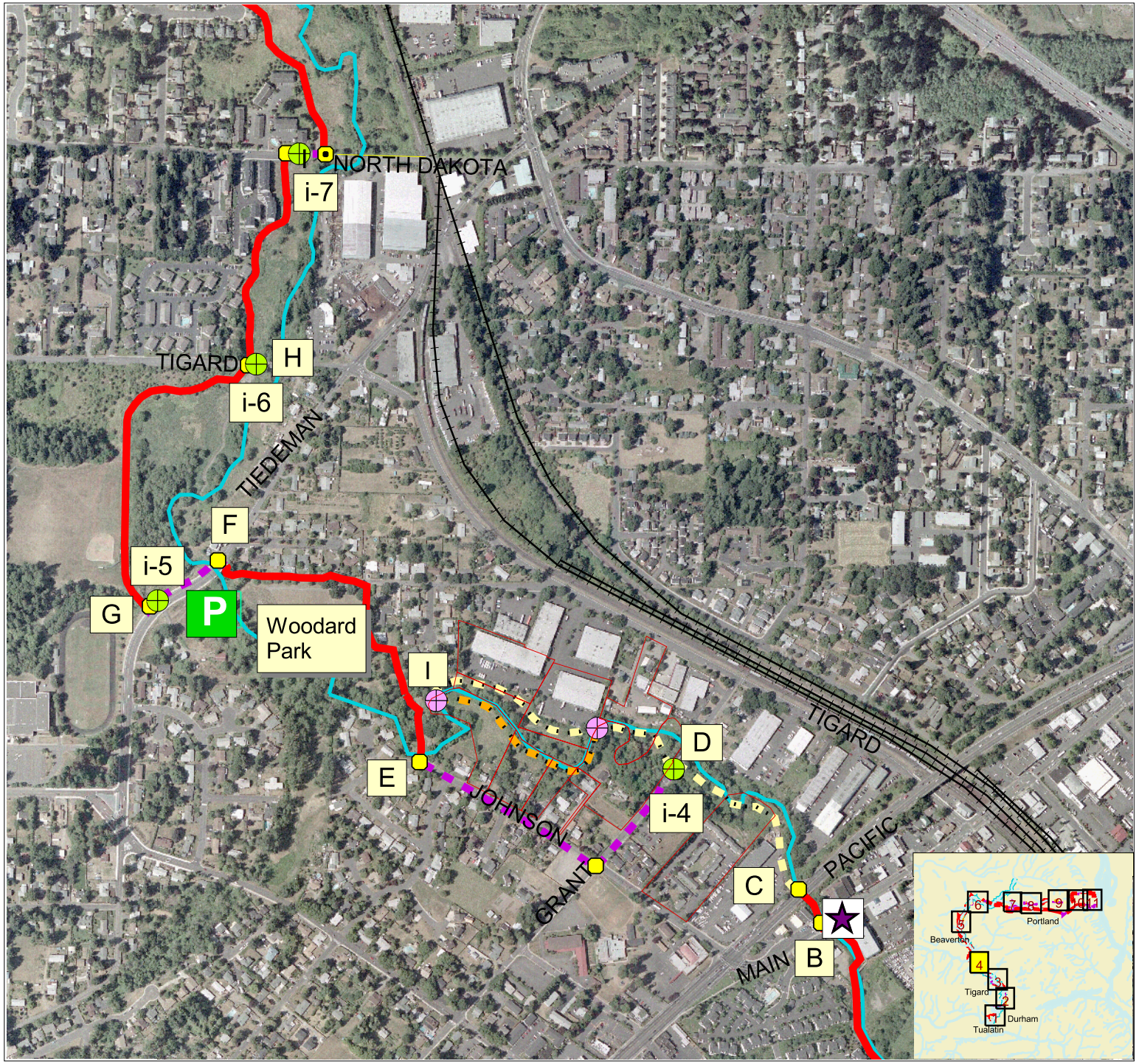

Fanno Creek Greenway Trail Action Plan

4 Main St. to North Dakota St.

LEGEND

Proposed Wayfinding Markers
- Information Map/Kiosk
- Signs
- Pavement Markings

Trailhead Parking
- P Current
- P Proposed

Proposed Crossing Treatments
- Roadway Crossing
- Roadway Crossing-Signal
- Stream Crossing

Fanno Trail Alignment
- Preferred Off-street
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- Completed Route
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- Railroad
- Fanno Creek

Property Ownership
- Easement Needed
- Easement Acquired

0 500 Feet

Map created: December 15, 2002
Source of data: Metro RLIS

METRO

N W E S

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Fanno Creek Greenway Trail Action Plan

5 Hall Blvd. Crossing Beaverton

LEGEND

Proposed Wayfinding Markers
- Information Map/Kiosk
- Signs
- Pavement Markings

Trailhead Parking
- P Current
- P Proposed

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- Roadway Crossing-Signal
- Stream Crossing

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- Railroad
- Fanno Creek

Property Ownership
- Easement Needed
- Easement Acquired

0 500 Feet

Map created: December 15, 2002
Source of data: Metro RLIS

METRO

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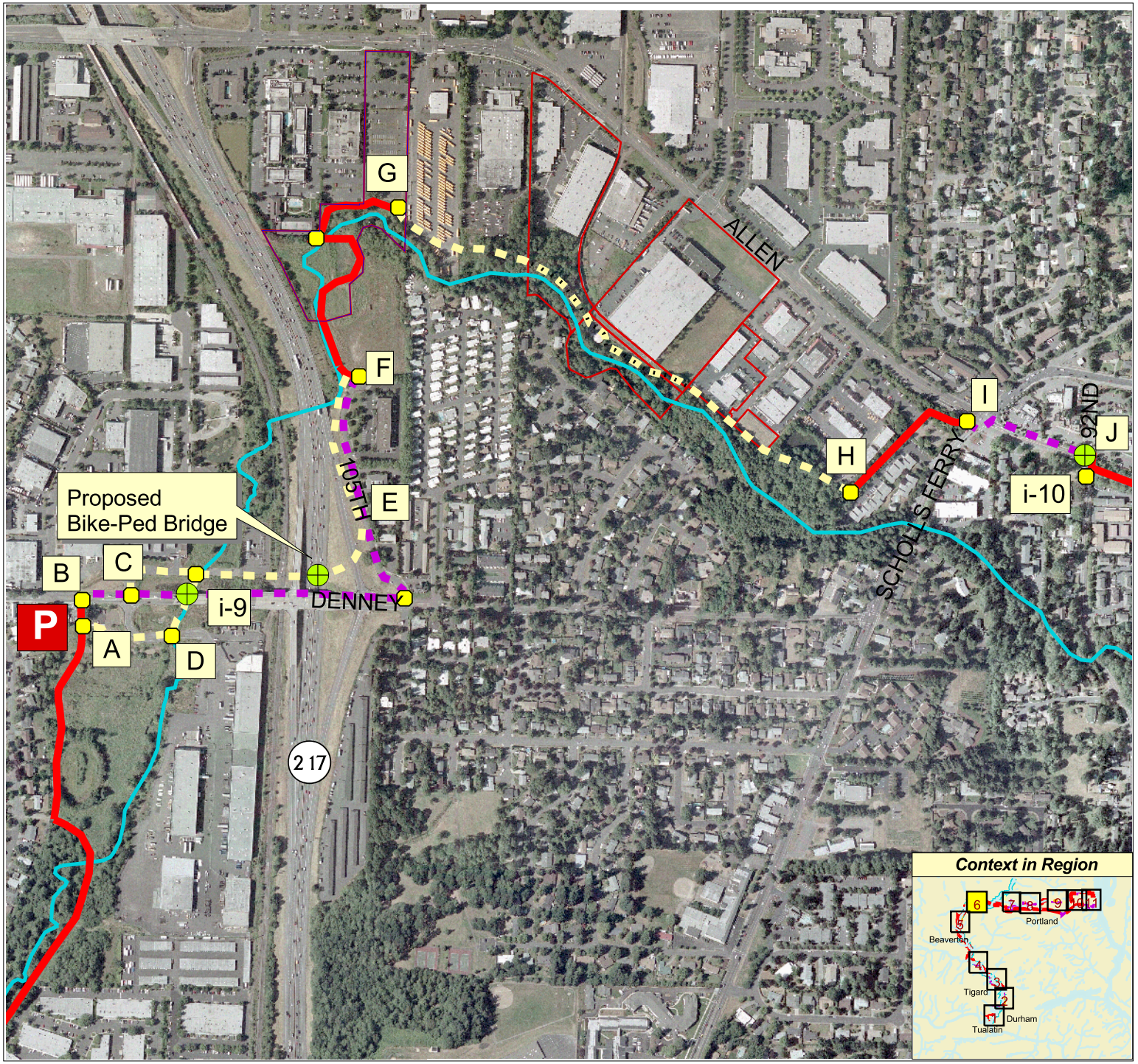


Fanno Creek Greenway Trail Action Plan

6 Denney Rd. to 92nd

LEGEND

Proposed Wayfinding Markers
- Information Map/Kiosk
- Signs
- Pavement Markings

Trailhead Parking
- P Current
- P Proposed

Proposed Crossing Treatments
- Roadway Crossing
- Roadway Crossing-Signal
- Stream Crossing

Fanno Trail Alignment
- Preferred Off-street
- Preferred On-street
- Alternate Route
- Completed Route
- Trail Requires Easement
- Railroad
- Fanno Creek

Property Ownership
- Easement Needed
- Easement Acquired

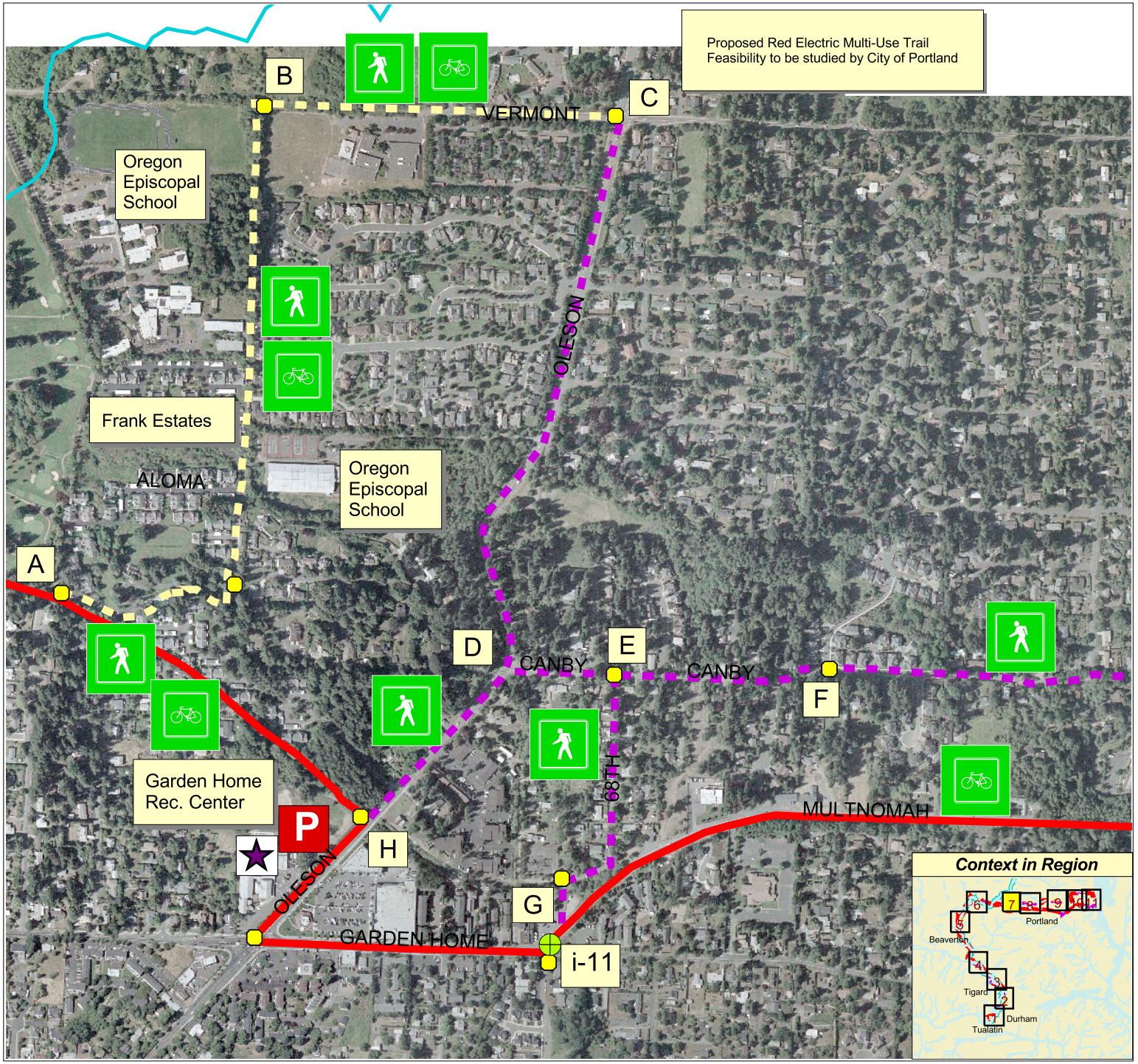
0 500 Feet

Map created: December 15, 2002
Source of data: Metro RLIS

METRO

N W E S

alta



Fanno Creek Greenway Trail Action Plan

7 Garden Home to SW 60th

LEGEND

Proposed Wayfinding Markers
- Information Map/Kiosk
- Signs
- Pavement Markings

Trailhead Parking
- P Current
- P Proposed

Proposed Crossing Treatments
- Roadway Crossing
- Roadway Crossing-Signal
- Stream Crossing

Fanno Trail Alignment
- Preferred Off-street
- Preferred On-street
- Alternate Route
- Completed Route
- Trail Requires Easement
- Railroad
- Fanno Creek

Property Ownership
- Easement Needed
- Easement Acquired

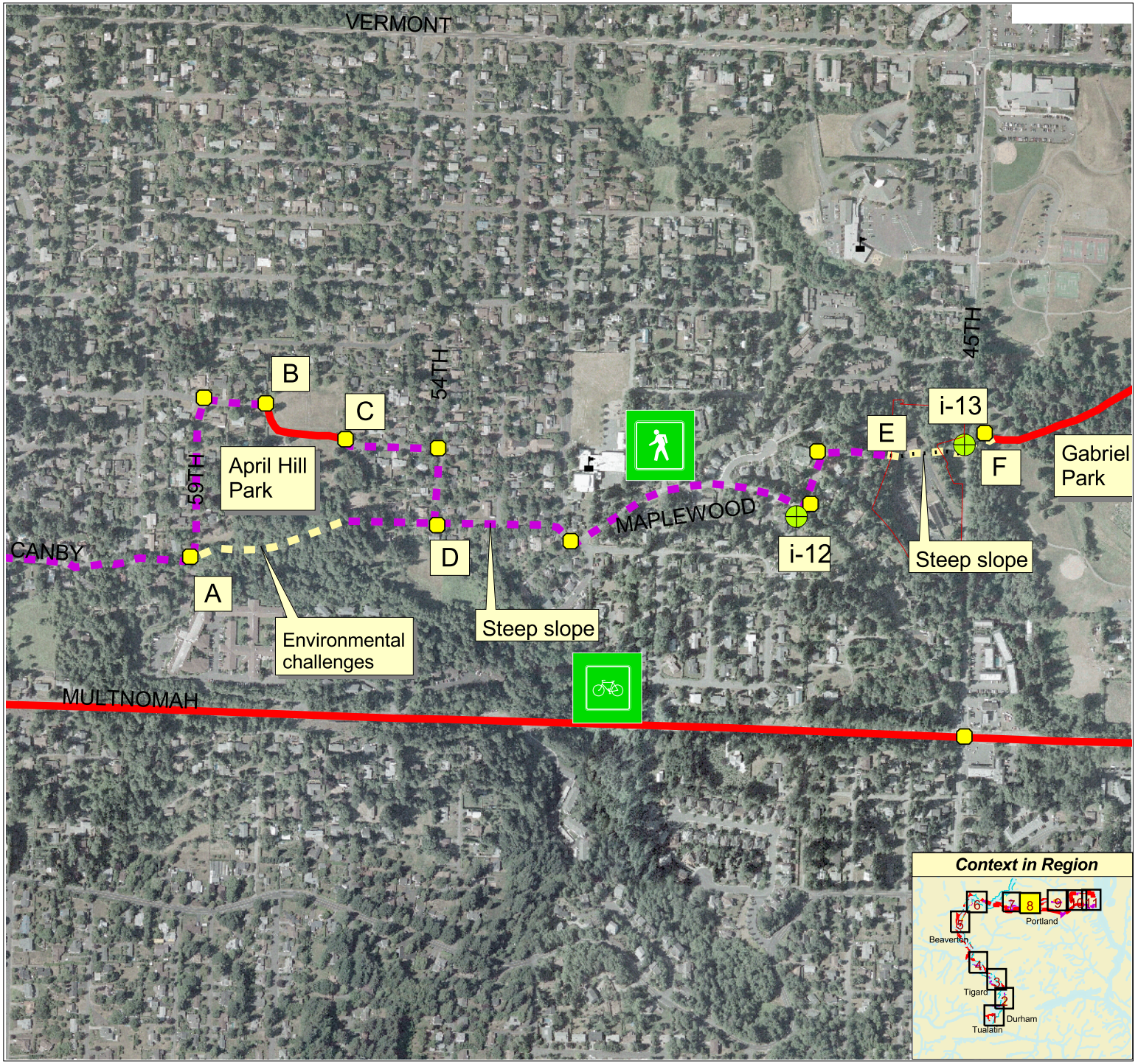
0 500 Feet

Map created: December 15, 2002
Source of data: Metro RLIS

METRO

N W E S

alta



Fanno Creek Greenway Trail Action Plan

8 SW 60th to Gabriel Park

LEGEND

Proposed Wayfinding Markers
- Information Map/Kiosk
- Signs
- Pavement Markings

Trailhead Parking
- P Current
- P Proposed

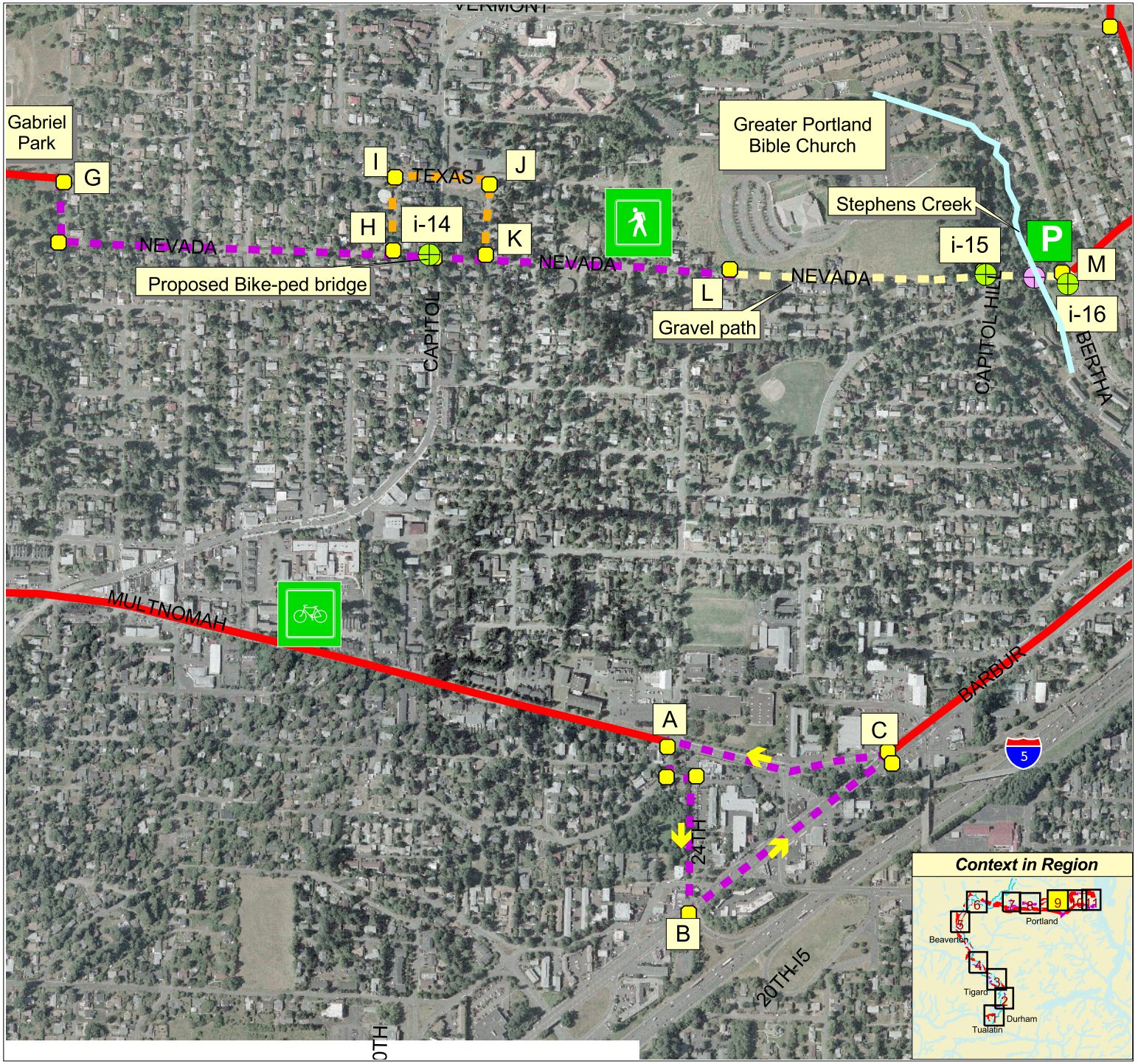
Proposed Crossing Treatments
- Roadway Crossing
- Roadway Crossing-Signal
- Stream Crossing

Fanno Trail Alignment
- Preferred Off-street
- Preferred On-street
- Alternate Route
- Completed Route
- Trail Requires Easement
- Railroad
- Fanno Creek

Property Ownership
- Easement Needed
- Easement Acquired

0 500 Feet

Map created: December 15, 2002
Source of data: Metro RLIS



Fanno Creek Greenway Trail Action Plan

9 Gabriel Park to SW Bertha

LEGEND

Proposed Wayfinding Markers
- Information Map/Kiosk
- Signs
- Pavement Markings

Trailhead Parking
- P Current
- P Proposed

Proposed Crossing Treatments
- Roadway Crossing
- Roadway Crossing-Signal
- Stream Crossing

Fanno Trail Alignment
- Preferred Off-street
- Preferred On-street
- Alternate Route
- Completed Route
- Trail Requires Easement
- Railroad
- Fanno Creek

Property Ownership
- Easement Needed
- Easement Acquired

0 500 Feet

Map created: December 15, 2002
Source of data: Metro RLIS

Fanno Creek Greenway Trail Action Plan

10 SW Bertha to George Himes Park

LEGEND

Proposed Wayfinding Markers

- Information Map/Kiosk
- Signs
- Pavement Markings

Trailhead Parking

- P Current
- P Proposed

Proposed Crossing Treatments

- Roadway Crossing
- Roadway Crossing-Signal
- Stream Crossing

Fanno Trail Alignment

- Preferred Off-street
- Preferred On-street
- Alternate Route
- Completed Route
- Trail Requires Easement
- Railroad
- Fanno Creek

Property Ownership

- Easement Needed
- Easement Acquired

0 500 Feet

Map created: December 15, 2002
Source of data: Metro RLIS

METRO

N W E S

alta

Fanno Creek Greenway Trail Action Plan

11 George Himes Park to Willamette Park

LEGEND

Proposed Wayfinding Markers
- Information Map/Kiosk
- Signs
- Pavement Markings

Trailhead Parking
- P Current
- P Proposed

Proposed Crossing Treatments
- Roadway Crossing
- Roadway Crossing-Signal
- Stream Crossing

Fanno Trail Alignment
- Preferred Off-street
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- Railroad
- Fanno Creek

Property Ownership
- Easement Needed
- Easement Acquired

0 500 Feet

Map created: December 15, 2002
Source of data: Metro RLIS

VI. FUNDING SOURCES

The following is a table that summarizes public funding sources for the Fanno Creek Greenway Trail. Some of these funds are restricted as to the type of improvements that qualify for assistance. Typically state and federal funds require trail and roadway improvements to comply with current Americans With Disabilities Act (ADA) Guidelines for accessibility.

Source	Description	Funding Cycle
MTIP Funding	Federal transportation funds coordinated by Metro. Funds can be used for Preliminary Engineering, ROW acquisition and construction.	2 years
Recreational Trails Grants	Coordinated by Oregon State Parks. Funds can be used for ROW acquisition and construction.	Annual
Land and Water Conservation Fund (LWCF)	Federal funds coordinated by Oregon State Parks. Funds can be used for ROW acquisition and construction.	Annual
Measure 66 funds from Oregon State Lottery	Coordinated by Oregon State Parks. Funds can be used for ROW acquisition and construction.	2 years
Transportation Enhancement Projects	Administered by Oregon Department of Transportation (ODOT). Must serve transportation need.	When federal funds available
Oregon Bike / Ped Grants	Administered by ODOT's Bike Program Project. Must be in a public ROW.	2 years
Community Development Block Grants	Federal funds administered by the counties and City of Portland for areas with low and moderate income households. Parks projects are eligible.	Annual
System Development Charges (SDCs).	Fees on new construction allocated for parks, streets and public improvements. Where available, funds can be used for ROW acquisition and trail construction	Varies
Local / regional bond measures approved by the voters	Funds can be used for ROW acquisition, engineering, design and trail construction.	Varies
Local Improvement Districts (LIDs)	Districts are typically created by local property owners, imposing a “new tax” to fund improvements. Funds can be used for ROW acquisition and trail construction.	Varies
Tax Increment Financing / Urban Renewal Funds	Park or trail project must be located in an urban renewal district which meets certain economic criteria and is approved by a local governing body.	Varies
Local Traffic Safety Commissions	Funding for street crossings and signals.	Varies

VII. SUMMARY OF MAINTENANCE GUIDELINES

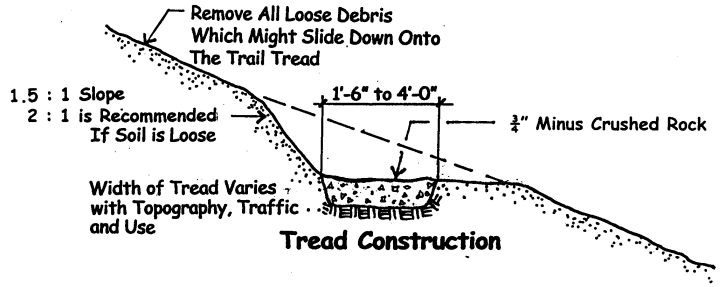
The following table summarizes a recommended maintenance schedule for the Fanno Creek Greenway Trail. These guidelines address maintenance on the off-street portions of the trail. On-street portions should be maintained as per the standards of the responsible jurisdiction.

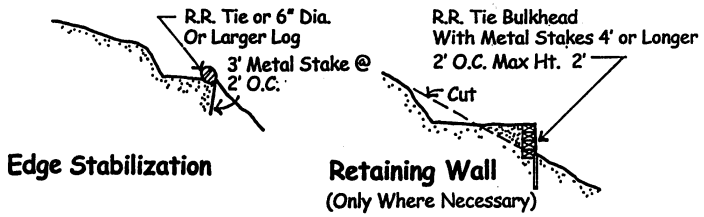
Item	Frequency
Inspections	Seasonal – at both beginning and end of summer
Signage Replacement	1-3 years
Pavement Markings Replacement	1-3 years
Major damage response, fallen trees, washouts, flooding clean up	Should be scheduled based on priorities
Pavement Sealing, Potholes	5-15 years
Introduced tree & shrub plantings, trimming/fertilization	Every 1-3 years
Culvert inspection	Before winter and after major storms
Cleaning ditches	As needed
Trash Disposal	Weekly during high use season, twice monthly during low use season
Lighting Luminaire Repair (Existing trail segment with lighting)	Once a year
Pavement Sweeping/ Blowing	As needed, before high use season. Weekly during fall.
Maintaining culvert inlets	Inspect before the onset of the wet season and after major runoff events
Shoulder Mowing (Weed encroachment into trail clearance area)	Twice a year, middle of growing season, then again in early fall
Waterbar maintenance (Earthen Trail Segments)	Annually
Site Furnishings, replace damaged components	As needed. Annual maintenance check
Graffiti Removal	Weekly, as needed
Fencing Repair (Rail with Trail Segment)	Inspect monthly for holes and damage, repair immediately.
Shrub/Tree Irrigation for introduced planting areas	Weekly during summer months until plants are established
Litter Pick-up	Weekly for high use season; twice a month for low use season

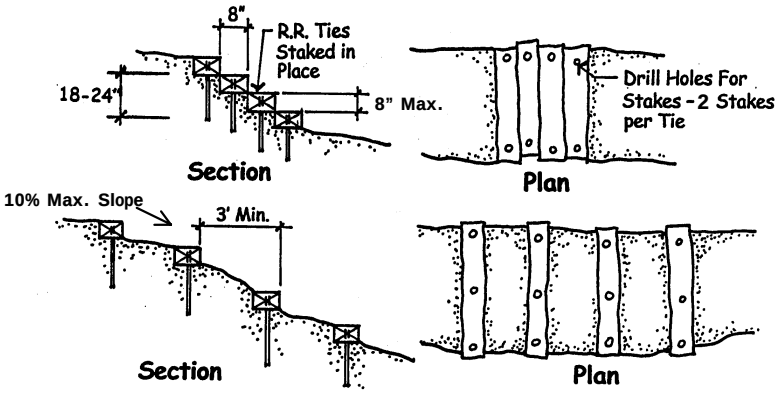
VIII. DESIGN DETAILS AND CROSSINGS

The following pages describe design details and sample intersection treatments for the Fanno Creek Greenway.

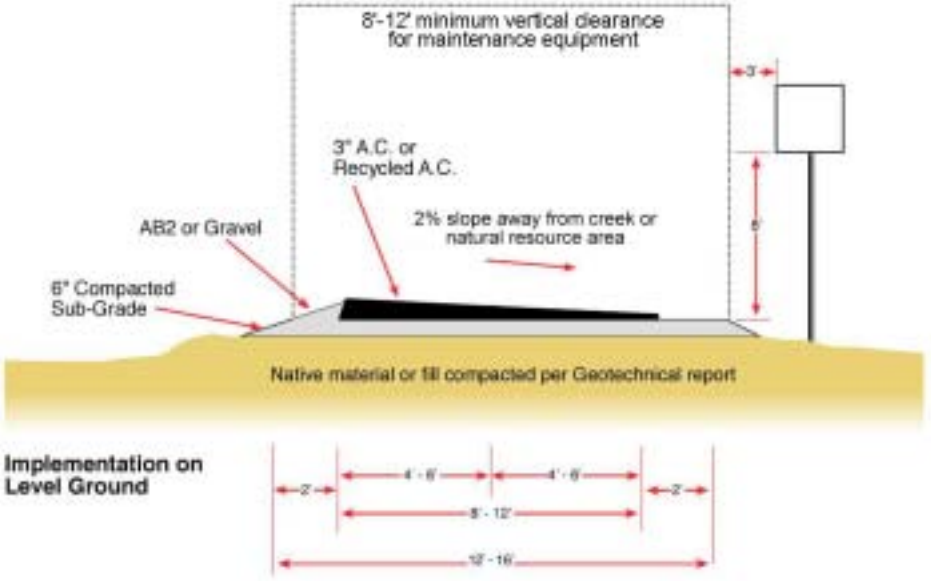
Typical Trail Sections

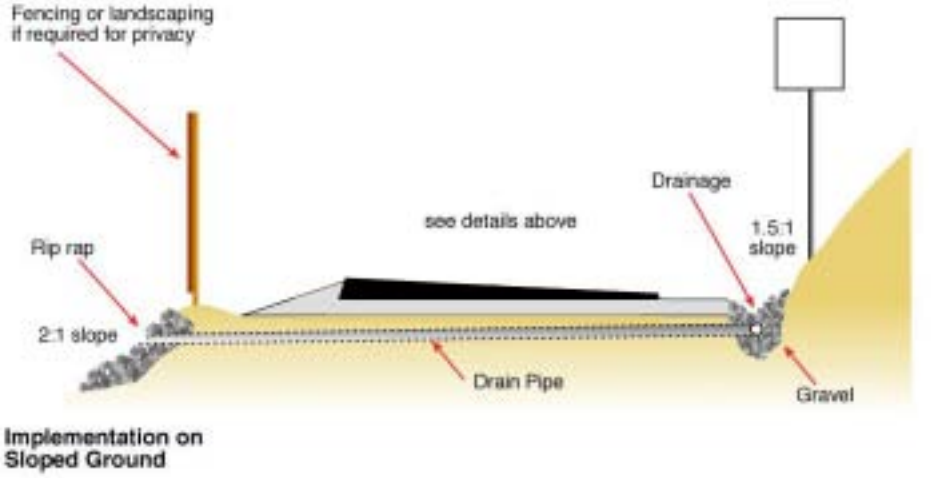






Earthen Trail Designs

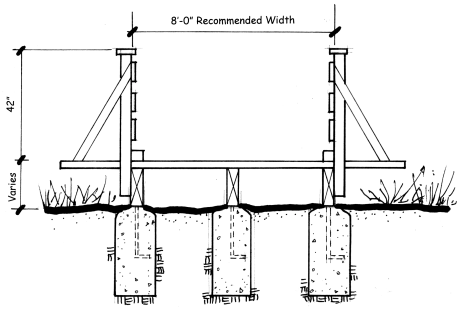




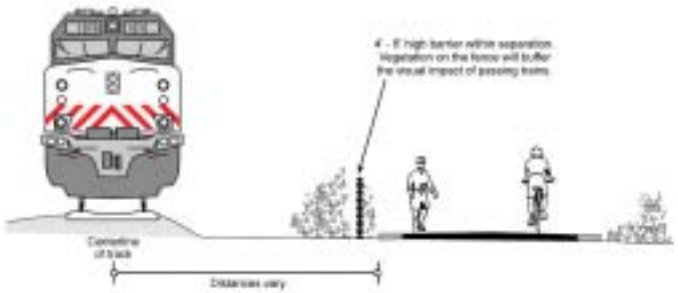
Typical Multi-Use Trail Section

Boardwalk/Bridge, RWT, and On-Street and Off-Street Concepts

Boardwalk/Bridge Concept



Rail-with-Trail Section (SW 74th Ave. section, in Tigard)



Off-Street Concepts

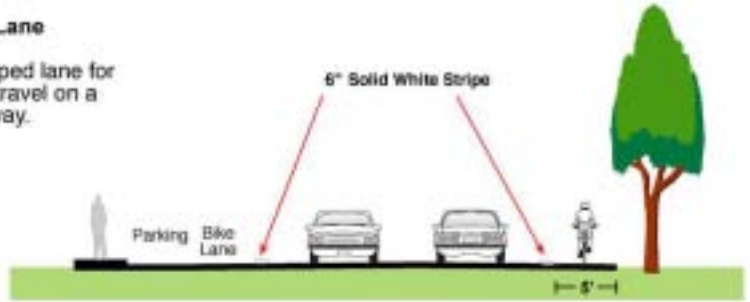
Typical Shared Use Path

Provides a completely separated right of way for the exclusive use of bicycles and pedestrians with crossflow minimized.

Typical Bike Lane

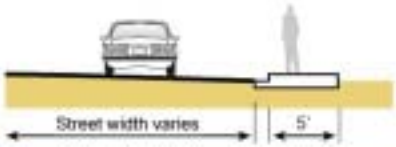
Provides a striped lane for one-way bike travel on a street or highway.

BIKE LANE



On-Street Concepts

Typical Sidewalk

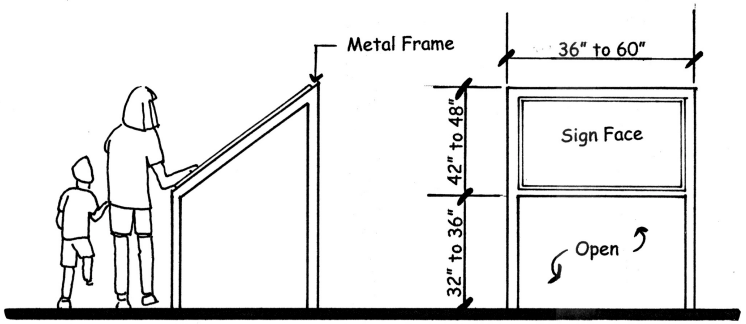


Typical Shared Use Roadway

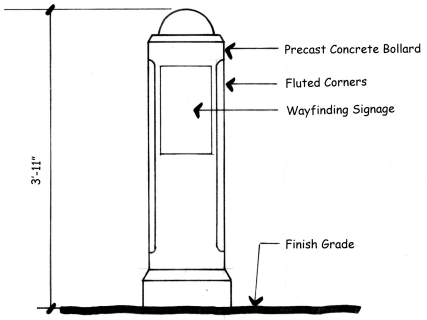
Provides for shared use with pedestrian or motor vehicle traffic, typically on lower volume roadways.

BIKE ROUTE

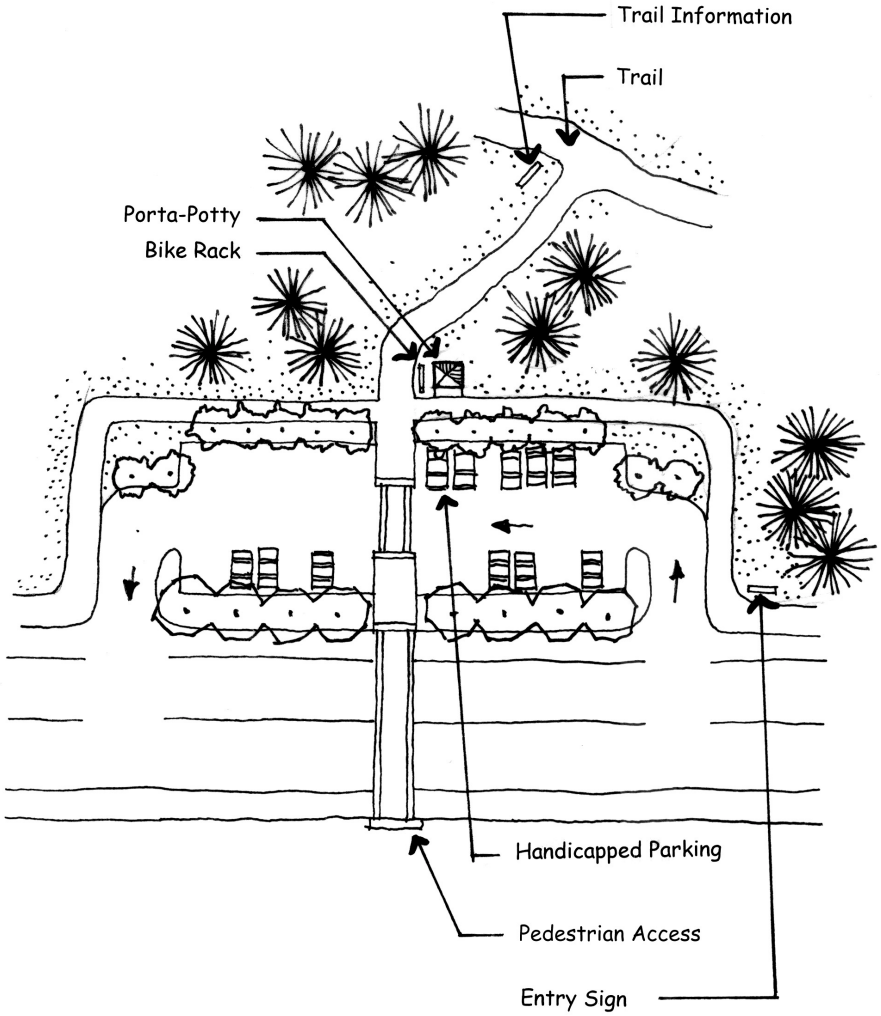
Interpretive Sign, Bollard, and Trailhead Concepts



Interpretive Sign

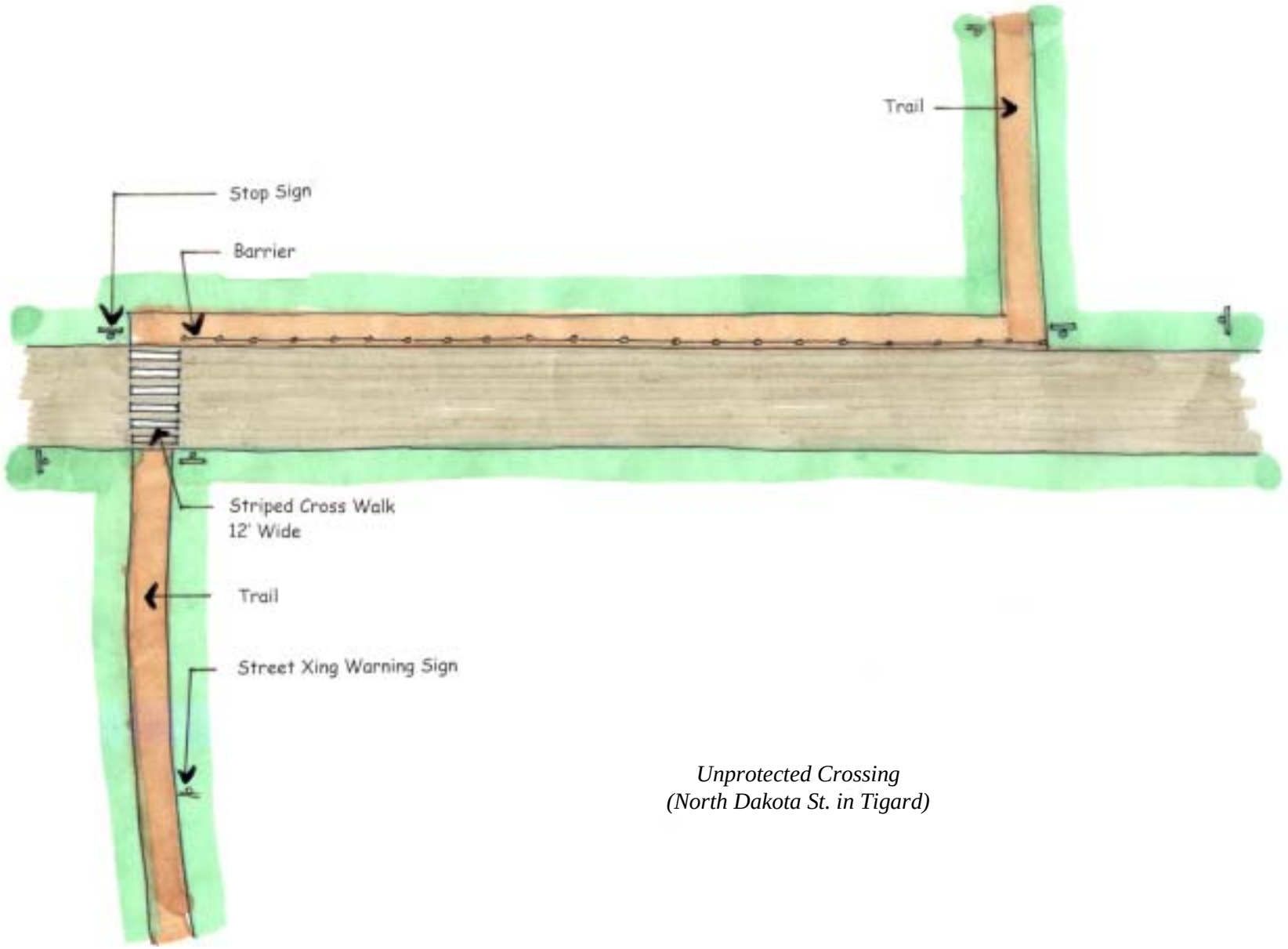


Bollard



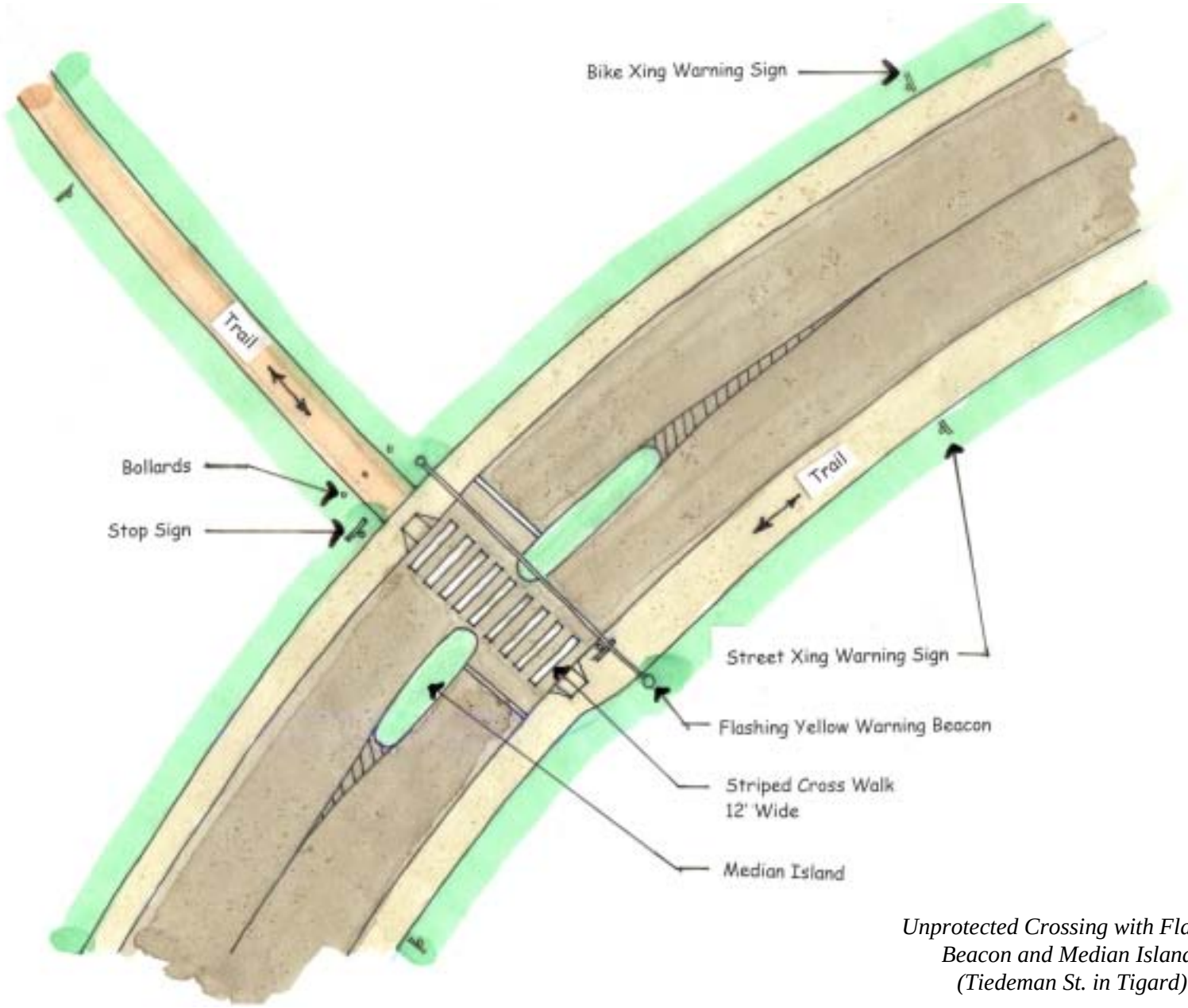
Potential Trailhead Design

Typical Intersection Treatments



Unprotected Crossing
(North Dakota St. in Tigard)

Typical Intersection Treatments

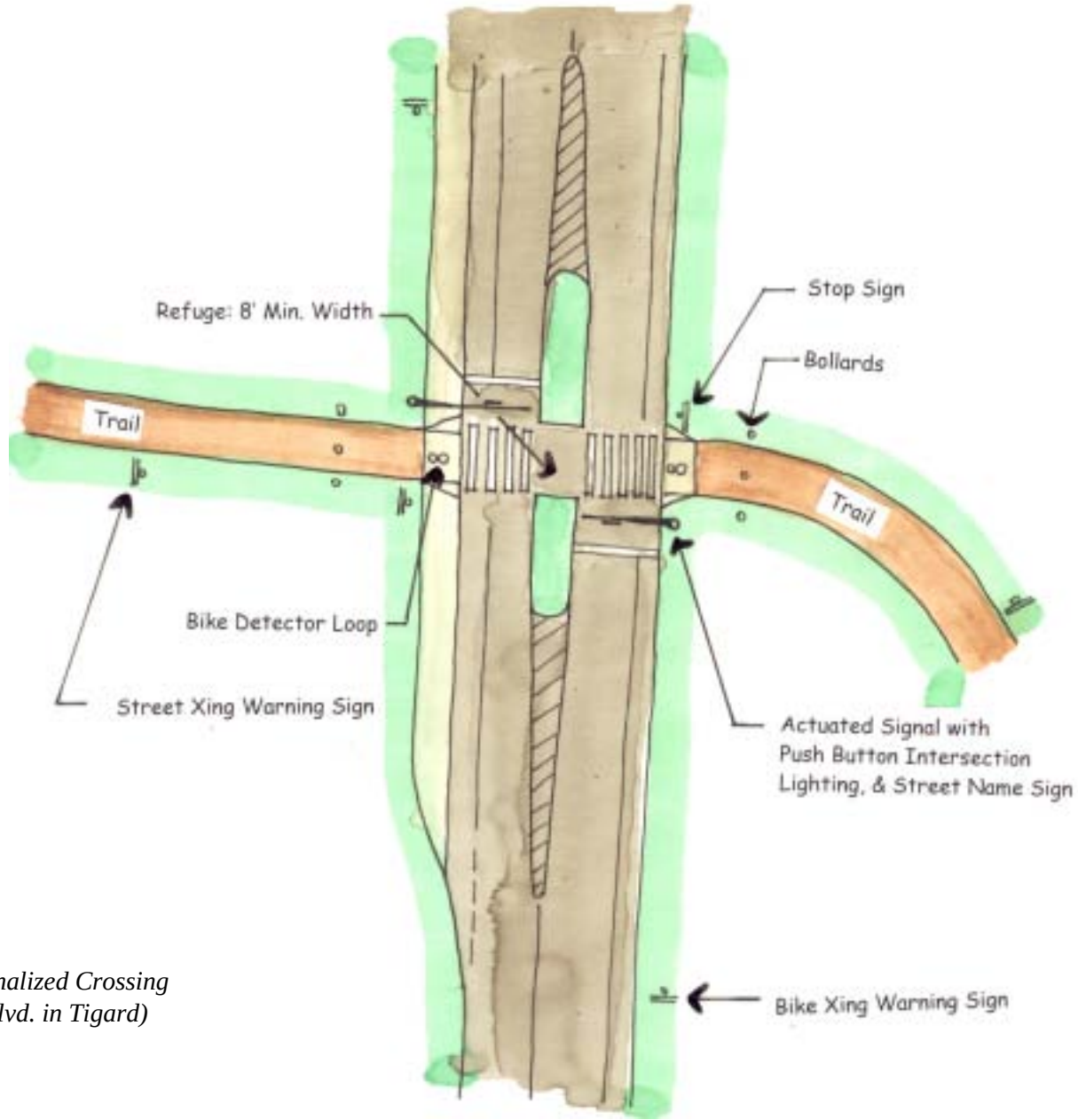


Unprotected Crossing with Flashing Beacon and Median Islands (Tiedeman St. in Tigard)

Typical Intersection Treatments

Unprotected Crossing with Curb Extension
(92nd Ave. and Allen Blvd. in Beaverton)

Typical Intersection Treatments



Fully Signalized Crossing
(Hall Blvd. in Tigard)

Signage

Trail Map Signage

Wayfinding and Informational Signage

APPENDIX

A. Fanno Creek Greenway Survey Results

Alta conducted a survey to determine which segments of Fanno Creek Greenway community members wanted to prioritize for completion. The survey listed 56 trail segments clustered into eleven different 'gaps', and asked respondents to assign low, medium or high priority to segments they wanted to weigh in on by giving them scores of 1, 2 or 3, respectively. Of over 50 surveys distributed, 23 were returned. Not every respondent voted on every segment.

The top and bottom ten segments are listed below, ranked by average score. The three highest segments were Gap 1, Segment i3; Gap 2, Segment i8-long term; and Gap 3, Segment i8-short term. The three lowest segments were Gap 10, Segment GH; Gap 10, Segment CD; and Gap 10, Segment EF.

Ten Most Prioritized Segments

Rank:	1	2	3	4	5	6	7	8	9	10
Gap:	3	5	5	6	1	3	6	7	4	6
Segment:	**i3**	**i8lt***	**i8st***	**GH**	**i1**	**KG**	**IJ**	**BC**	**i5**	**i10**
Avg. Score:	2.92	2.92	2.80	2.80	2.73	2.64	2.64	2.64	2.62	2.62
# votes:	12	12	10	15	11	14	14	14	13	13

(* "lt" = long term option; "st" = short term option)

Ten Least Prioritized Segments

Rank:	47	48	49	50	51	52	53	54	55	56
Gap:	9	2	9	9	11	11	10	10	10	10
Segment:	**AG**	**AC**	**GH**	**LM**	**AB**	**HI**	**AB**	**GH**	**CD**	**EF**
Avg. Score:	1.89	1.85	1.75	1.70	1.70	1.67	1.60	1.60	1.40	1.40
# votes:	9	13	12	10	10	12	10	10	10	10

B. SUMMARY OF PLANNING PROCESS

During the past two years (2001-02), Metro Regional Parks and Greenspaces has coordinated a partnership of cities, counties, special districts, nonprofit organizations, and citizens to develop an action plan to complete the trail. To date, approximately one-half of the 15-mile trail has been completed.

Funding for the action plan came from the local partners previously listed (and Clean Water Services of Washington Co., Portland's Bureau of Environmental Services, and Audubon Society of Portland).

A working group of the partners has been meeting almost monthly for the past two years to develop the plan. Alta Planning + Design was retained by Metro as project consultant.

The Action Plan will be used as a "living" implementation document and guide for local, state, and regional agencies, nonprofit organizations and citizen based groups to complete the trail (e.g. where to purchase needed right-of-way; and where to make capital improvements).

The maps in the plan will be updated once a year by Metro from information it receives from the local partners. The working group of partners will meet a least once a year to discuss the progress of completing the trail. Uniform signage, maps and kiosks were recommended in the plan, but further collaboration will be required among the partners to carryout these tasks.

More than Sixty Public Meetings, Outreach and Involvement Activities Were Held

- Briefings to governing bodies, planning commissions and park advisory boards
- Briefings to agencies, including planning, transportation, engineering, and maintenance staff
- Briefings to neighborhood groups, community planning organizations (CPOs), parks and trails groups, and other interested parties
- A series of four public workshops conducted in April and September 2002
- Monthly guided bike and walking tours along the trail
- Articles in local and neighborhood newspapers, including the *Oregonian* and Metro's GreenScene
- Direct mailings to interested parties
- Cable television rebroadcast of some of the briefings for governing bodies

Products

- Fanno Creek Trail Action Plan (including maps) in hard copy and on a CD.
- The Action Plan and maps will be on Metro's Web Site with links to local partners' web sites.
- Virtual Tour of the Trail (produced by Dawn Uchiyama and Matthew Hampton and available at cost from Metro on a CD)

For more information or questions, contact:

Mel Huie, Regional Trails Coordinator, Metro Regional Parks and Greenspaces
(503) 797-1731, huiem@metro.dst.or.us